

**ENVIRONMENTAL ASSESSMENT
LIVESTOCK GRAZING AUTHORIZATION**

EA Number: CA-650-2004-42

Allotment Name: Olancho Common Allotment

Ridgecrest Field Office, BLM

March 7, 2006

Comments, including names and street addresses of respondents, will be available for public review at 300 S. Richmond Rd., Ridgecrest, CA 93555, during regular business hours (7:30 a.m. to 4:00 p.m.), Monday through Friday, except weekends and holidays, and may be published as part of the EA. Individual respondents may request confidentiality. If you wish to withhold your name or street address from public review or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your written comment. Such requests will be honored to the extent allowed by law. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.

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CHAPTER 1

A. INTRODUCTION

The grazing permit for cattle operation on Olancho Common Allotment expired at the end of the 1999 grazing year (2/28/00). This grazing permit was renewed under the authority of Public Law 106-113. The duration of a grazing lease renewal varies by allotment based on factors that include rangeland health condition. The grazing lease was renewed for a ten year term, and contained the same terms and conditions as the expiring grazing lease. Public Law 106-113 required compliance with all applicable laws and regulations, which include the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA). Following the analysis of environmental impacts this grazing lease may be canceled, suspended or modified, in whole or in part, to meet the requirements of such applicable laws and regulations.

The Washington Office Instruction Memorandum 2003-071 requires that all grazing permits and leases that expired in 1999 and 2000 be “fully processed” by the end of Fiscal Year 2004 (9/30/04). The term “fully processed” permit/lease refers to the completion of an adequate environmental analysis and issuance of a proposed grazing decision in accordance with 43 CFR 4160, and appropriate consultation in accordance with the ESA.

The Bureau of Land Management (BLM) is proposing to issue a 10 year permit on the Olancho Common allotment to authorize livestock grazing. The Olancho Common allotment encompasses approximately 13,905 acres of BLM lands and 1,973 acres of non-BLM lands. The allotment is located in Inyo County, California. Elevation range is between 3950 feet and 5440 feet. Vegetation communities are a mix of Creosote Bush Scrub, Joshua Tree Woodland, and Great Basin Scrub.

B. NEED FOR THE PROPOSED ACTION

The proposed action is needed to authorize grazing in accordance with 43 CFR 4100 and consistent with the provisions of the *Taylor Grazing Act*, *Public Rangelands Improvement Act*, and *Federal Land Policy and Management Act*. Action may be required to maintain or improve resource conditions including rangeland health. The existing permit is valid for a 10 year term, ending on 2/28/2010, subject to the terms and conditions therein. The terms and conditions of the permit may be modified according to the findings of this environmental assessment.

Plan Conformance & Relationship to Statues, and Regulations

The proposed action is subject to the California Desert Conservation Area Plan (CDCA Plan) 1980 as Amended (August 1999). The proposed action has been determined to be in conformance with this plan as required by regulation (43 CFR §1610.5-3(a)). The proposed action would occur in areas identified for livestock grazing as indicated in the Livestock Grazing Element in the CDCA Plan 1980 (1999), pages 56 to 68. The proposed action is consistent with the land use decisions, and goals and objectives listed in the CDCA Plan.

Rangeland Health Standards have been met (have not been met) in the following ways.

Rangeland Health Standard	Meets Standard	Does Not Meet Standard	Impacts from Livestock Yes or No	Remarks
Soil Permeability	met			
Riparian/Wetland		Not met	yes	Bedding, over consumption, and trampling of riparian vegetation.Loss of protective vegetation
Stream Morphology		Not met	yes	Trampling of stream banks leading to widening of channel
Native Species	met			

Assessment determination scheduled to be completed on September 20, 2004.

Endangered Species

The allotment also provides habitat for the State listed Mohave Ground Squirrel species. According to the MOU between BLM and CDFG we agree: "to notify the Department of all projects involving impacts to, or manipulation of, State-listed rare (threatened) and endangered fish, wildlife and plants and to obtain State recommendations of the project-specific management of such populations."

Cultural Resources

California BLM has explicit responsibility to manage cultural resources on public lands under the National Historic Preservation Act (NHPA; P.L. 89-665); Federal Land Policy and Management Act (FLPMA; P.L. 94-579); Archaeological Resources Protection Act (ARPA; P.L. 96-95); Native American Graves Protection and Repatriation Act (NAGPRA; P.L. 101-601); American Indian Religious Freedom Act (AIRFA; P.L. 95-431); and other law and implementing regulation. General compliance with these requirements is outlined in the Programmatic Agreement Among the Bureau of Land Management, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers Regarding the Manner in which BLM Will Meet Its Responsibilities Under the National Historic Preservation Act (National PA) and the Protocol Agreement between California BLM and the California State Historic Preservation Officer Regarding the Manner in which BLM Will Meet Its Responsibilities Under the National Historic Preservation Act (Protocol Agreement).

All grazing permits that cover cattle grazing will be subject to compliance with Section 106 of the National Historic Preservation Act following procedures defined in an amendment to the Protocol Agreement (Livestock Grazing Amendment or Amendment). Background site record and literature review will be conducted. Inventory will focus on the intersection between areas that are known or suspected to contain significant cultural resources and areas in which cattle congregate and therefore have the greatest potential to affect cultural resources. An inventory design following the terms of the Protocol Range Amendment will be written for each allotment. Inventory will be carried out following that design. Results of inventory and actions taken to avoid adverse effects to cultural resources will be reported annually to the BLM California State Office and the State of California Office of Historic Preservation. Compliance with Section 106 requirements must be completed within 10 years. Federally recognized and State recognized Native American tribal groups and individuals are being consulted on issues of concern to them, such as the presence of sacred, traditional use, or other culturally important areas or features. The results of this analysis will be used to modify grazing permits. Stipulations on each grazing permit will be modified to reflect compliance with the Livestock Grazing Amendment. All cultural resources will be subject to review and evaluation to identify effects resulting from grazing and related activities. All cultural resources will be afforded protection or mitigation consistent with law, policy, and the Protocol Livestock Grazing Amendment.

Special Status Plant Species:

It is BLM's policy to carry out management, consistent with the principals of multiple use, for the conservation of Special Status Plant Species and their habitats and will ensure that actions authorized, funded, or carried out do not contribute to the need to federally list any of the species as threatened or endangered.

Wilderness (No wilderness present in Olancha Common Allotment)

Water Quality

The federal Clean Water Act (CWA) delegates to the states the authority to regulate certain activities that may affect water quality. The California State Porter-Cologne Act (CA Water Code ' 13140-13143) establishes the State Water Quality Control Board and nine Regional Water Quality Control Boards (RWQCB). It directed the preparation of Basin Plans and provided guidance on factors to include in the plans. It also implemented the Federal Clean Water Act. The project is within the Lahontan Region and under the jurisdiction of the Lahontan RWQCB. The RWQCB has prepared a Basin Plan which includes beneficial uses and water quality standards.

Air Quality

The Olancho Common Allotment falls within the jurisdiction of the Great Basin Unified Air Pollution Control District (GBUAPCD). The GBUAPCD has state air quality jurisdiction over the area including the Olancho Common Allotment. The air district has rules which apply to most emissions including fugitive dust emissions.

Federal Conformity: Projects within federal air quality nonattainment areas have an additional burden in that federal agencies must make a determination that its actions conform to the State Implementation Plans (SIP) before the action is taken (Section 176 (c) of the Clean Air Act (CAA), as amended (42 U.S.C. 7401 et seq.) and regulations under 40 CFR part 93 subpart W). These authorities address the conformity of general federal actions to SIPs. These authorities state, "No department, agency or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license or permit, or approve any activity which does not conform to an applicable implementation plan". Regulations at 40 CFR Part 93.153 Applicability includes a number of exceptions to the requirements of the conformity rules including the following:

“(c) The requirements of this subpart shall not apply to the following Federal actions:
(iii) Continuing and recurring activities such as permit renewals where activities will be similar in scope and operation to activities currently being conducted.”

Regulations: For livestock grazing purposes, the handling of sensitive species that may be found on the allotment are subject to BLM regulations at 43 CFR 4100 (grazing regulations).

Plans: West Mojave Plan (Proposed Habitat Conservation Plan/CDCA Plan amendment): BLM, U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), county and city governments, various interest groups, the U.S. military, and a number of public lands stakeholders currently are developing this plan. Upon completion, it is intended to amend the CDCA Plan. The West Mojave Plan is a local bio-regional planning effort addressing State and federally-listed species, specifically the desert tortoise. BLM issued the West Mojave Plan Draft Environmental Impact Statement (WMP-DEIS) in May 2003.

CHAPTER 2 PROPOSED ACTION AND ALTERNATIVES

A. CURRENT MANAGEMENT

The Current Management consists of authorizing cattle grazing on the Olancha Common allotment, under one grazing permit, for a term of ten years. The current season of use and permitted use, including management actions and stipulations, listed below is also included in the grazing permit.

1. Livestock Numbers and Season of Use

Allotment	Number	Kind	Class	From	To	AUMs
Olancha Common	200	Cattle	Cow/calf	4/1	6/30	598

2. Livestock Management

Olancha Common Allotment (See Map, Appendix 1) is a perennial cattle grazing allotment of 15,878 acres comprised of 1,973 acres non-BLM land and 13,905 acres of BLM land. The rancher is allotted 598 active AUMs that are used during the spring season (April-June). Over the last nine years the use on Olancha Common Allotment has ranged from 192 to 446 AUMs and “non-use” was taken once. At the present time there is no fence that creates a strict boundary between the northern and southern halves of the allotment. However, the management practice is to utilize a two pasture rotational grazing system. This is accomplished through alternating use by every other year on the northern and southern halves of the allotment. The permittee will take pro-active measures to control livestock movement between the north and south and to distribute cattle throughout the grazing areas. These pro-active measures include, but not limited to, using the placement of salt (ensuring salt placement remains at least ¼ mile from nature waters.), controlling the availability of water and periodic herding of cattle. Turn-out will be subject to range readiness.

Hogback Creek (intermittently), Summit Creek, and Walker Creek provide most of the water to the allotment.

3. Range Improvements

Appendix 2 lists all range improvements including those to be upgraded or added as new improvements to maintain or achieve rangeland health.

4. Measures to Maintain or Achieve Standards (Terms and Conditions of Permit)

Construct exclosure fence along Olancha Creek to protect aquatic wildlife and riparian vegetation.

5. Monitoring

The rangeland monitoring of this allotment would be conducted as it is currently in three categories. These categories would be 1) short term monitoring, 2) long term monitoring, and 3) interpreting the indicators of rangeland health through an allotment assessment.

The use of short term monitoring is a tool to gauge the cause and effect of the current authorization. This type of monitoring consists of actual use, current climatic conditions and the collection of utilization data. This type of data would be collected on a yearly basis at minimum. The collection of utilization data should be triggered by the end of the grazing period and be completed prior to the initiation of next year's growth. The collection of long term monitoring data typically occurs every four to five years. The collection of trend data, both photo and measured trend is used to determine long term cause and effect of long term grazing strategies. The measurement of trends is accomplished through the collection of frequency and cover data at key areas. The collection of indicators of rangeland health information is a qualitative method that requires the formation of an interdisciplinary team that makes observations of various indicators to determine the health of rangelands and the achievement of fallback or regional standards of rangeland health. This process is also considered a long term, and typically occurs every 10 years.

B. PROPOSED ACTION

The proposed action is the same as the current management with the following additions to monitoring.

1. Monitoring

Add all riparian areas, including the adjacent benches, as key areas for monitoring in the Olancho Common Allotment.

Add salt grass, sedge, rushes and willows to the key species list along with their proper use factors to the Olancho Common Allotment AMP. The PUFs would be salt grass (30%), sedge (30%), rushes (30%) and willow (10%).

Regional Standards and Guidelines

With the recent approval of the Western Mojave Desert Plan Amendment the following Standards and Guidelines are incorporated into the grazing Permit & management practices.

Standards:

Soil

Soils exhibit infiltration and permeability rates that are appropriate to soil type, climate geology, landform, and past uses. Adequate infiltration and permeability of soils allow accumulation of soil moisture necessary for optimal plant growth and vigor, and provide a stable watershed as indicated by:

- Canopy and ground cover are appropriate for the site;
- There is diversity of plant species with a variety of root depths;
- Litter and soil organic matter are present at suitable sites;
- Maintain the presence of micro biotic soil crusts that are in place;
- Evidence of wind or water erosion does not exceed natural rates for the site;
- Hydrologic and nutrient functions maintained by permeability of soil and water; infiltration are appropriate for precipitation.

Native Species

Healthy, productive and diverse habitats for native species, including special status species (Federal T&E, federal proposed, federal candidates, BLM sensitive, or California State T&E, and CDD UPAs) are maintained in places of natural occurrence as indicated by:

- Photosynthetic and ecological processes continue at levels suitable for the site, season, and precipitation regimes;
- Plant vigor, nutrient cycle, and energy flow are maintaining desirable plants and ensuring reproduction and recruitment;
- Plant communities are producing litter within acceptable limits;
- Age class distribution of plants and animals are sufficient to overcome mortality fluctuations;
- Distribution and cover of plant species and their habitats allow for reproduction and recovery from localized catastrophic events;
- Alien and noxious plants and wildlife do not exceed acceptable levels;
- Appropriate natural disturbances are evident;
- Populations and their habitats are sufficiently distributed to prevent the need for listing special status species.

Riparian/Wetland and Stream Function

Wetland systems associated with subsurface, running, and standing water, function properly and have the ability to recover from major disturbances. Hydrologic conditions are maintained as indicated by:

- Vegetative cover will adequately protect banks, and dissipate energy during peak water flows;
- Dominant vegetation is an appropriate mixture of vigorous riparian species;
- Recruitment of preferred species is adequate to sustain the plant community;
- Stable soils store and release water slowly;
- Plants species present indicate soil moisture characteristics are being maintained;
- There is minimal cover of invader/shallow-rooted species, and they are not displacing deep-rooted native species;
- Maintain shading of stream courses and water sources for riparian dependent species;
- Stream is in balance with water and sediment being supplied by the watershed;

- Stream channel size and meander is appropriate for soils, geology, and landscape;
- Adequate organic matter (litter and standing dead plant material) is present to protect the site and to replenish soil nutrients through decomposition.

Water Quality

Surface and groundwater complies with objectives of the Clean Water Act and other applicable water quality requirements, including meeting the California State Standards, as indicated by:

- The following do not exceed the applicable requirements: chemical constituents, water temperature, nutrient loads, fecal coliform, turbidity, suspended sediment, and dissolved oxygen;
- Achievement of the Standards for riparian, wetlands, and water bodies;
- Aquatic organisms and plants (e.g., macro invertebrates, fish and algae) indicate support of beneficial uses;
- Monitoring results or other data that show water quality is meeting the Standard.

Guidelines for Grazing Management

Manage grazing activities with the following regional guidelines.

- Facilities are to be located away from riparian-wetland areas wherever they conflict with achieving or maintaining riparian-wetland functions.
- The development of springs and seeps or other projects affecting water and associated resources will be designed to protect the ecological functions and processes of those sites.
- Grazing activities at an existing range improvement that conflict with achieving proper functioning conditions (PFC) and resource objectives for wetland systems (lentic, lotic, springs, adits, and seeps) will be modified so PFC and resource objectives can be met, and incompatible projects will be modified to bring them into compliance. The BLM will consult, cooperate, and coordinate with affected interests and livestock producer(s) prior to authorizing modification of existing projects and initiation of new projects. New range improvement facilities are to be located away from wetland systems if they conflict with achieving or maintaining PFC and resource objectives.
- Supplements will be located a sufficient distance away from wetland systems so they do not conflict with maintaining riparian wetland functions.
- Management practices will maintain or promote perennial stream channel morphology (e.g., gradient, width/depth ratio, channel roughness, and sinuosity) and functions that are appropriate to climate and landform.
- Grazing management practices are to meet State and Feral water quality standards. Where impoundments (stock ponds) and troughs that have a sustained discharge yield of less than 200 gallons per day to surface or groundwater are exempted from meeting State drinking water standards per SWRCB Resolution Number 88-63.
- In the California Desert Conservation Area all wildfires in grazing allotments will be suppressed. However, to restore degraded habitats infested with invasive weeds (e.g., tamarisk) prescribed burning may be utilized as a tool for restoration on a case-by-case

basis. Prescribed burns may be used as a management tool for chaparral plant communities in the South Coast Region, where fire is a natural part of the regime.

- In years when weather results in extraordinary conditions seed germination, seedling establishment and native plant species growth shall be allowed by modifying grazing use.
- Grazing on designated ephemeral (annual and perennial) rangeland is allowed to occur only if reliable estimates of production have been made, an identified level of annual growth or residue to remain on site at the end of the grazing season has been established, and adverse effects on perennial species are avoided.
- During prolonged drought, range stocking will be reduced to achieve resource objectives and/or prescribed perennial forage utilization. Livestock utilization of key perennial species on year-long allotments will be checked about March 1 when the Palmer Severity Drought Index/Standardized Precipitation Index indicates dry conditions are expected to continue.
- Through the assessment process or monitoring efforts, the extent of invasive and/or exotic plants and animals will be recorded and evaluated for future control measures. Methods and prescription will be implemented, and an evaluation will be completed to ascertain future control measures.
- Restore, maintain or enhance habitats to assist in the recovery of federally listed threatened and endangered species. Restore, maintain or enhance habitats of special status species including Federal proposed, Federal candidates, BLM sensitive, or California State T&E to promote their conservation.
- Grazing activities will support biological diversity across the landscape, and native species and micro biotic crusts are to be maintained.

Experimental and research efforts will be encouraged to provide answers to grazing management and related resource concerns through cooperative and collaborative efforts with outside agencies, groups, and entities.

C. NO GRAZING ALTERNATIVE

This alternative would not issue a grazing permit on the Olancho Allotment. As a result, grazing would not continue on the Olancho Allotment. This is to be a permanent action. The BLM would initiate a process in accordance with the 4100 regulations to permanently eliminate grazing on the allotment.

D. ALTERNATIVE NUMBER 1

This alternative is proposed by the rancher operator and authorizes grazing with modifications to the permit's season of use.

1. Livestock Numbers and Season of Use

This alternative would move the beginning of the season of use from 4/1 to 3/1 and end the season of use on 5/31 instead of 6/31.

Allotment	Number	Kind	Class	From	To	AUMs
Olancha Common	200	Cattle	Cow/calf	3/1	5/31	604

B. Livestock Management

The alternative would allow the rancher to take better advantage of spring forage. Other livestock management issues are the same as for the Proposed Action.

C. Range Improvements

Range improvements are the same as those listed in the proposed action alternative.

D. Measures to Maintain or Achieve Standards (Terms and Conditions of Permit)

Construct exclosure fence along Olancha to protect aquatic wildlife and riparian vegetation.

E. Monitoring

Monitoring would be the same as described for the proposed alternative.

No Grazing Alternative

This alternative would not renew the permit on the Olancha Common allotment. As a result, grazing would not continue on the Olancha Common allotment. This is to be a permanent change. The BLM would initiate a process in accordance with the 4100 regulations to permanently eliminate grazing on the allotment.

CHAPTER 3 ENVIRONMENTAL ANALYSIS

A. AIR QUALITY

a. Affected Environment

Air quality throughout the allotment area is generally good. There are, however, times that portions of the area have not meet air quality standards due to locally generated and/or transported in pollutants. Currently portions of the project area are classified as nonattainment areas for PM₁₀ under state standards and National Ambient Air Quality Standards (NAAQS). The area is unclassified for the new PM_{2.5} standard. The Olancha Common Allotment falls within the USEPA designated Owens Valley PM₁₀ Planning Area (nonattainment) and the Coso Junction PM₁₀ Planning area (maintenance).

Implementation plans have been prepared for the Owens Valley and Coso Junction PM₁₀ planning areas which identify sources of PM₁₀ emissions and control measures to reduce emissions. Livestock grazing is not specifically addressed in the PM₁₀ plans. The emphasis in the Owens Valley plan is control of emissions from Owens Lake which accounts for 99.9% of the PM emissions.

b. Environmental Consequences

1. Impacts of Proposed Action

Direct and Indirect Impacts:

Fugitive dust could occur due to the soil disturbance as a result of the trampling action of the cattle when soil moisture levels are low. Support vehicle use on the access roads will generate small amounts of PM₁₀ emissions throughout the grazing area and could carry soils onto the paved roads which would increase entrainment emissions. PM₁₀ emissions as a result of the existing grazing activities are estimated to be well below the 100 ton significant level in the allotment. Grazing related PM₁₀ emission levels are not considered significant in the PM₁₀ SIPs. Ruminant animals emit methane gas which is a precursor emission for ozone. Ozone precursor emissions are expected to be minimal. No significant offsite impacts are anticipated. The existing grazing use doesn't exceed the de minimus emission levels and is exempt from conformity determination (40 CFR Part 93.153 (iii)) which exempts continuing and recurring activities such as permit renewals where activities will be similar in scope and operation to activities currently being conducted. As a result no further conformity analysis or determination is necessary.

Irreversible and irretrievable commitment of resources

No irreversible or irretrievable commitment of air resources would result.

Residual Impacts

Residual impacts to air quality include continued dust emissions from vehicle activity and grazing operations and hydrocarbon and combustion emissions from ruminant animals and internal combustion engines during the grazing operations. No long term residual adverse effects on air resources are expected from the Proposed Action. The impacts are expected to occur during the duration of the existing grazing. Once the action is completed, the site should return to pre grazing emission levels.

Cumulative Impacts

The cumulative effect area for air resources for the Proposed Action is the Coso Junction and the Owens Valley PM₁₀ planning areas. The Owens Lake Bed is identified as the major source of PM₁₀ emissions in the PM₁₀ planning area and it is the target of all of the control measures. The expected emission levels are within the levels in the attainment demonstrations in the SIPs and the cumulative NAAQS 24 hour and one year PM_{2.5} and PM₁₀ emission standards and the one and eight hour ozone emission standards and are not likely to result in or contribute to incidences where the National Ambient Air Quality Standards are exceeded.

Recommended mitigation measures

None

2. Impacts of Alternative #1

Impacts to air quality as a result of the Alternative 1 would be the same as the Proposed Action.

3. No Grazing

No impacts to air would occur as a result of grazing activities.

4. Cumulative Impacts

N/A

c. References

References at the end of the document

B. AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)

a. Affected Environment

The proposed action and alternatives would have no affect on ACECs because there are no lands so designated in the allotment.

C. BIOLOGICAL SOIL CRUSTS

a. Affected Environment

Biological soil crusts are likely to occur over most of the Allotment. Soil crusts were found at 2 of the 3 upland sites sampled during the rangeland health assessments. Soils with these crusts are often referred to as cryptogamic soils. The open space between higher plants is not generally bare of all life. Highly specialized organisms make up a surface community consisting of cyanobacteria, green algae, lichens, mosses, microfungi and other bacteria. The cyanobacteria and microfungal filaments weave through the top few millimeters of soil holding loose soil particles together forming a biological crust which stabilizes and protects soil surfaces. The biological crusts aid moisture retention, fix nitrogen, and may discourage the growth of annual weeds. Below the surface, the soil flora grow various rhizines, hyphae and filaments that further bind the soil together. Most of the biological crust organisms make their growth during cool moist conditions.

b. Environmental Consequences

Proposed Action:

Direct and Indirect Impacts:

It is thought that the low to mid-elevation arid ecosystems in the west developed with low levels of surface disturbance. As a result the crusts in these areas are easily disturbed by trampling by grazing animals which apply compressional and shear forces. The crust response to these disturbances is highly variable. Moisture and burial are two important factors relating to the degree of impact. Moist crusts are better able to withstand disturbances than dry soils. Many of the biological crust species are not mobile and cannot survive burial. This results in the loss of most mosses, lichens, green algae and small cyanobacteria. The large, filamentous cyanobacteria can move 5mm per day if it is wet and can survive if it is wet. The general result of burial is a greatly simplified crustal community due to the loss of species. Grazing in the late winter and spring can reduce both species diversity and cover of biological crusts because the soils are dry. These allotments have been grazed for over one hundred years and it is likely that continued grazing would not make any appreciable additional changes in the biological crust species diversity.

Irreversible and Irretrievable commitment of Resources:

Biological soil crusts can recover from disturbance over time. The time factor is dependent upon the degree of displacement and soil moisture. In moist conditions partial recovery of the mobile species can occur in days. More complete recovery of all species on a site can be from five to seventy years.

Residual:

The same as Direct and Indirect Impacts

Cumulative Impacts:

The long term result of continued impacts is a greatly simplified crustal community due to the loss of species.

Recommended Mitigation:

None

Alternative 1:

Similar to Proposed Action

No Grazing:

Direct and Indirect Impacts:

A slow recovery of the less mobile crust species would occur.

Irreversible and Irretrievable commitment of Resources:

Biological soil crusts can recover from disturbance over time. The time factor is dependent upon the degree of displacement and soil moisture. In moist conditions partial recovery of the mobile species can occur in days. More complete recovery of all species on a site can be from five to seventy years.

Residual:

Same as direct impacts

Cumulative Impacts:

The long term result of removing grazing impacts is a more complex crustal community due to species recovery.

Recommended Mitigation:

None

c. References

Listed at the end of the document

D. CULTURAL RESOURCES

a. Affected Environment

Cultural resource information available for the Olancha allotment consists entirely of data collected through inventory for historic and prehistoric archaeological materials. Ridgecrest Field Office records indicate that at least 25 archaeological sites have been recorded within the allotment, most of these along the corridors of highways and transmission lines that pass through the area. Recorded sites include prehistoric habitation and resource procurement sites that contain lithic artifacts, groundstone, pottery, rock art, and subsurface deposits. Historic features include rock walls, water lines, buildings, home sites, and a historic railroad grade. While a number of the sites have been affected by road/highway use and construction, transmission line construction and maintenance, and other activities, most still contain intact features or deposits. None have been evaluated for listing in the National Register of Historic Places but it may be expected that some of them do meet criteria for listing in the National Register. The area inventoried for archaeological materials covers less than 5% of the entire area of the allotment, so it may be expected that many unrecorded archaeological resources exist within the allotment. Other types of cultural resources may also exist. An area adjacent to the allotment between Highway 395 and Haiwee Reservoir has been subjected to higher levels of archaeological inventory and nearly 50 archaeological sites have been recorded there, indicating that site densities may be far higher within the allotment than the data on file suggests.

b. Environmental Consequences

1. Impacts of Proposed Action (Same as Current Management)

Data on specific impacts of grazing at specific archaeological sites is unavailable. General discussion of how grazing impacts archaeological resources is available. The following discussion is taken from Environmental Assessment Livestock Grazing Authorization, EA Number CA 170-03-54, BLM Bishop Field Office, December 2003.

Livestock use impacts on cultural resources include: displacement (vertical and horizontal) and breakage of artifacts, and the mixing of depositional associations through trampling; destruction or enhanced deterioration of structures and features through rubbing; and an acceleration of natural erosional processes. Plants valued by Native American traditionalists could be trampled or consumed by livestock, adversely affecting plant availability at some locations. For purposes of analysis it is assumed that

the impacts of livestock use are distributed in proportion to the actual distribution of livestock, with the most intensive impacts occurring at livestock use concentration areas. Cultural resources located on lands having erosional or other types of watershed deterioration problems attributed to livestock use impacts are assumed to receive high impacts. Cultural resources are non-renewable, and impacts of livestock use on cultural resources are cumulative (USDI, BLM 1982).

Relatively few studies have been undertaken to address the impacts of domestic livestock grazing to archaeological resources (Archaeological Sites Protection and Preservation Notebook:

Technical Notes (ASPPN) I-15; Osborn et al. 1987; Roney 1997; Thomas D. Burke personal communication [to Kirk Halford, ed. note] 1998), with more emphasis being placed on the effects of human trampling in site formation processes (see Nielson 1991). Nonetheless, the same conclusions have been drawn from these studies as summed by Nielson (1991).

Intensive trampling modifies the horizontal distribution of artifacts, it obscures patterns existing in their original deposition, and eventually introduces new trends in their spatial arrangement. By producing vertical migration of materials it also can move artifacts across stratigraphic units, and mix in the same deposit items originating in different occupations. When trodden, artifacts undergo several types of damage, like breakage, micro-chipping and abrasion. The resulting traces sometimes mimic the damage produced by use or by other post-depositional processes and therefore can lead unwittingly to erroneous functional interpretations (Nielson 1991:483-484).

Variables influencing the level of impact at any given site include: 1) soil type (e.g., hard or rocky soil substrates will lead to greater artifact damage and horizontal displacement); 2) soil moisture (e.g., wet soils will lead to greater vertical displacement and stratigraphic mixing); 3) vegetation type/ground cover (depending on site landform specifics, erosion may increase as vegetation cover decreases resulting in significant secondary impacts); and 4) intensity of grazing.

The studies reviewed here are experimental tests of trampling impacts (Archaeological Sites Protection and Preservation Notebook: Technical Notes (ASPPN) I-15, 1990; Nielson 1991; Osborn et al. 1987; Roney 1977). All of the studies found that smaller artifacts (< 2 g [ASPPN 1991]) tend to migrate vertically more readily than larger artifacts thus biasing site interpretation in cases where no subsurface analyses are involved. In a controlled experiment within a portable corral, Roney (1977) found that after 40 hours, in which 78 cows were rotated through the corral, that only 5% of 60 flaked stone artifacts could be found on the surface. The hard soil substrate was churned to a fine dust to 5 cm (depth, approximately 2 inches, ed. note), 81% of the artifacts were horizontally displaced up to .75 m (meters [approximately 2 feet], ed. note) and 48% were damaged and broken. Roney (1977) concluded that "...cattle do produce significant physical damage to lithic artifacts."

Nielson (1991), in his assessment of human trampling, found the same trends with top soil loosening occurring in 1-2 cm (depth, approximately 1 inch or less) on a hard soil substrate with subsoils being compacted. Again smaller items tended to migrate downward, but were less apt to move horizontally than large specimens. Sixty percent of the lithic debitage (stone flakes from tool manufacture, ed. note) showed damage ranging from abrasion, microflaking, and breakage. As would be expected, ceramics showed the greatest level of impact with a random distribution of sizes being reduced to a skewed, unimodal distribution dominated by smaller size classes less than 30 cm (12 inches, ed. note) in diameter. We can predict that cattle impacts would be highly magnified over Nielson's (1991) results from his studies on human trampling, but would follow the same trends.

In field visits Tom Burke (personal communication 1998), owner and principal investigator of Archaeological Research Services, Inc., has found cattle grazing to have "substantial adverse effect to archaeological site integrity." In heavy use areas mixing can occur up to 10-20 cm (centimeters; 4 to 8 inches, ed. note) in most conditions and up to 30-40 cm (12 to 16 inches, ed.

note) in wet conditions. The author's investigations corroborate Burke's assessments. As would be expected, Burke has found impacts to be highest in areas where cattle tend to congregate such as springs, water courses, troughs, shade zones, and salt licks. The zone of impact around such features extends from 25-100 meters (approximately 75-300 feet, ed. note), with a linear pattern of roughly 25 to 50 meters (approximately 75 to 150 feet, ed. note) following stream courses. Field assessments in the Bishop Field Area support these observations.

In summary, it can be concluded that livestock grazing can have adverse effects to archaeological resources causing artifact damage, movement, and mixing. In the case of standing structures, cattle rubbing or scratching can cause severe impacts causing structure degradation and collapse (Chuck Fell, Bodie State Historical Park, personal communication 1995). Intensity of grazing, soil hardness, moisture, vegetation cover, and type are factors influencing the level and types of impacts. Erosion is a secondary impact resulting from grazing that can also have negative effects to cultural sites. The areas of greatest concern are those locations where livestock congregate and tend to spend a large percentage of the time. In zones where livestock are more dispersed, such as upland locations, it can be predicted that impacts will be mainly surficial, causing no stratigraphic mixing, but perhaps resulting in horizontal displacement of artifacts. In rocky areas and zones without sufficient feed very little to no cattle impact is expected to occur (field observation 1999). (The above discussion taken from USDI, BLM 2003.)

Impacts other than physical damage or movement may occur. Organic material deposited by cattle, especially in concentration, may affect certain kinds of analysis, such as blood residue analysis performed on artifacts to determine species of animals hunted by prehistoric populations. In summary, impacts are very likely occurring to archaeological resources located in areas in which cattle concentrate. One primary location of such impacts would be expected along the drainages within the allotment that contain water for all or part of the year. Several such areas have been identified as moderate use areas using data collected in the 1980s. Four high use areas along drainages have also been identified. Areas around range developments, such as water troughs, salt licks, etc. may also exhibit impacts from congregation of cattle. Other areas may be identified as inventory is carried out.

2. Alternative Number 1

Impacts from this alternative would be the same as for the Proposed Action.

3. No Grazing

Selection of this alternative would eliminate further direct impacts to cultural resources. Damage that has already occurred may continue to degrade resources through the action of soil erosion and other such effects. This alternative would also eliminate an activity that may be considered a historic use in the area and may have adverse effects on the traditional values of those engaged in the activity

4. Cumulative Impacts

The cumulative impacts of grazing over the past hundred years or so and into the foreseeable future could result in severe degradation or complete destruction of some resources in areas in which the intensity of use is high. Cumulative impacts may occur from other actions, such as vehicle use on routes also used to access grazing allotments or developments, camping in riparian areas that are also frequented by cattle, recreational use of areas also used by cattle, and continued maintenance and improvement of Highway 395 and transmission lines through the area.

Recommended Mitigation

All range improvements that have not been previously inventoried for cultural resources or that are modified, repaired, moved, upgraded, etc. will be inventoried for cultural resources prior to work on the improvement.

Any new improvements will be inventoried for cultural resources prior to construction. The proposed locations of such will be moved to avoid effects to cultural resources as needed.

The following mitigation from the Livestock Grazing Amendment should be incorporated into the grazing permit if this alternative is selected, to be used as inventory identifies effects to cultural resources:

Standard Protective Measures will be carried out as inventory identifies effects to cultural resources. If these measures can be effectively applied, no evaluation or further consultation with SHPO will be required. In situations in which these measures will not address effects, consultation with SHPO will be initiated.

Standard Protective Measures can include but are not limited to:

A. Fencing or enclosure of livestock from the cultural resource sufficient to ensure long-term protection, according to the following specifications:

1. the area within the enclosure must be inventoried to locate and record all cultural resources; and
2. the enclosure (i.e.) fence must not divide a cultural resource so that a portion is outside of the fence; and
3. the cultural resource specialist will determine the appropriate buffer to be provided between the cultural resource and its enclosing fence.

B. Relocation of livestock management facilities/improvements at a distance from cultural resources sufficient to ensure their protection from concentrated grazing use.

C. Removal of natural attractants of livestock to a cultural resource when such removal, in the judgment of the cultural resource specialist, will create no disturbance to the cultural resource (e.g. removing vegetation that is providing shade).

D. Removal of the area(s) containing cultural resources from the allotment.

E. Livestock herding away from cultural resource sites.

F. Use of salting and/or dust bags or dippers placement as a tool to move concentrations of cattle away from cultural sites.

G. Other protective measures established in consultation with and accepted by SHPO.

H. Conduct yearly monitoring to ensure that treatment measures are effective.

c. Consultation

Consultation with the State Historic Preservation Officer will be required as outlined in the grazing appendix to the state Protocol Agreement and will largely take the form of annual reports on progress and measures taken to avoid, eliminate, or mitigate impacts to cultural resources. Individuals or groups other than Native Americans who may have traditional or cultural concerns about the area will be contacted as they are identified or as they identify themselves to BLM.

d. References

Listed at the end of the document

E. ENVIRONMENTAL JUSTICE

a. Affected Environment

The grazing allotment being analyzed is located in rural Inyo County. The rural areas of this county are typically occupied by moderate to low-income households. The lessees that hold the grazing lease for the allotment being analyzed typically have moderate incomes. Seasonal laborers that may be hired by the lessee generally come from low-income households.

b. Environmental Consequences

1. Impacts of Current Management and Proposed Action

The implementation of the current management or proposed action would have an affect but not a disproportionate affect on low-income or minority populations living on or near the allotments being analyzed.

The grazing of livestock in rural Inyo County has been a common practice for over 100 years. Typically ranching has been performed by persons of low to moderate income, and may or may not be considered a minority. There are no Native American communities on or near any of the allotments being analyzed.

2. Alternative #1: Proposed by rancher

This alternative would have no disproportionate affect on low-income or minority populations living on or near the allotments being analyzed.

3. No Grazing

Under the no grazing alternative there would be an affect but not a disproportionate affect with respect to low-income or minority populations. The loss of livestock grazing in rural Inyo County could result in the loss of seasonal employment to a very small component of low-income or minority populations.

4. Cumulative Impacts

There are no known cumulative impacts to low-income or minority populations as a result of current grazing practices (proposed action). The no grazing alternative may have some cumulative present and future impacts to a very small component of low-income or minority populations.

c. Consultation

All affect Native American tribes with traditional ties to the lands within the allotments being analyzed would be consulted.

F. FARMLANDS, PRIME OR UNIQUE

a. Affected Environment

The proposed action and alternatives would have no affect on unique or prime farmlands because there are no lands so designated in the allotment

G. FLOOD PLAINS

a. Affected Environment

The proposed action and alternative would have no affect on flood plain because no lands are so designated in the allotment

H. INVASIVE, NON-NATIVE SPECIES

a. Affected Environment

The definition of “weed” is always debatable. Traditional definitions include “plants out of place” or “plants that by their presence conflict with management objectives for the site.” The BLM definition also incorporates the concept of public land health and sustainability and reads: “A weed is defined as a non-native plant that disrupts or has the potential to disrupt or alter the natural ecosystem function, composition and diversity of the site it occupies. Its presence deteriorates the health of the site, makes efficient use of natural resources difficult, and it may interfere with management objectives for that site. It is an invasive species that requires a concerted effort (manpower and resources) to remove from its current location, if it can be removed at all.” “Noxious” weeds refer to those plants which have been legally designated as unwanted or undesirable. This includes national, state, and county or local designations. According to the Federal Noxious Weed Act of 1974 (7 U.S.C. 2802(c)) native plant species are not designated “noxious”. In addition to the state and national noxious plants lists, BLM has issued a “BLM National List of Invasive Weed Species of Concern”. In a 1995 Memorandum of Understanding

between the BLM and other federal agencies and the State of California, Priority would be placed on eradication, control or containment of “A” rated weed species and localized infestations of “B” and “C” rated weeds according to California Administrative Code 4500. According to the State of California Department of Food and Agriculture, “A” rated Noxious weeds are to be eradicated, contained or refused entry, “B” rated Noxious weeds are more widespread, and therefore more difficult to contain and eradication is left up to local county Agricultural Commissioners and “C” rated Noxious weeds may be so wide spread that the state does not endorse eradication or containment.

Inventory work conducted over the last several years has detected more than twenty species of noxious/invasive weeds on or adjacent to public lands within the Ridgecrest Field Office. Five of those species occur on or adjacent to The Olancha Common Allotment (table 1). Salt cedar has been identified for control in the area. Some of these species are quite widespread in the area. Cheat grass is found through out the allotment. Recent inventory work has detected additional species which may need control work. Salt cedar is found at one site in the Olancha Common Allotment along Olancha Creek.

Bossard et al (2000) note that the “presence of salt cedar is associated with dramatic changes in geomorphology, groundwater availability, soil chemistry, fire frequency, plant community composition and native wildlife diversity.” The non-native annual grasses such as cheat grass, red brome and Arabian grass are thought to deteriorate wildlife habitat values by out-competing the more desirable native forbs for nutrients and space. Non-native invader species such as red brome and cheat grass are wide spread in the allotment and have been related to overgrazing. The current relation of these species to grazing is unknown as they are as prevalent in isolated areas which have never been grazed as they are in grazed areas. Grazing related weedy invader species have not become a problem in the allotment.

Invasive/Noxious Weeds Olancha Common Allotment Table 1			
Common Name	Scientific Name	CDFA Rating	CalEPPC Rating
downy brome(cheat grass)	<i>Bromus tectorum</i>		A-1
salt cedar	<i>Tamarix ramosissima</i> (&others)	C	A-1
red brome grass	<i>Bromus (rubens) madritensis</i> <i>Ssp. rubens</i>		A-2
Russian thistle	<i>Salsola tragus</i>	C	
Mediterranean grass	<i>Schismus arabicus</i>		

b. Environmental Consequences

1. Impacts of Current Management and Proposed Action

Direct and Indirect Impacts:

It is unknown what role the cattle would have in maintenance, spread or introductions of new noxious weeds. The cattle could be shipped from areas which may have noxious weed populations. It may be possible for the cattle to carry seeds with them. It is possible that the cattle spread existing noxious weed populations by mechanically moving seeds and modifying high intensity use sites to provide a more favorable environment for the weeds.

Irreversible and Irretrievable commitment of Resources:

The introduction of exotic species, especially noxious weeds is very difficult if not impossible to reverse. Some of the noxious weeds have the potential to totally dominate a site.

Residual:

The same as Direct and Indirect Impacts

Cumulative Impacts:

Weed encroachment is a regional and national problem. Weeds found in the Olancho Common Allotment are part of the larger problem.

Recommended Mitigation:

Continue to inventory for weed populations and use an integrated approach for management.

2. Impacts of Alternative #1

Direct and Indirect Impacts:

Impacts will be similar to the Current Management/Proposed Action.

Irreversible and Irretrievable commitment of Resources:

The introduction of exotic species, especially noxious weeds is very difficult if not impossible to reverse. Some of the noxious weeds have the potential to totally dominate a site.

Residual:

The same as Direct and Indirect Impacts

Cumulative Impacts:

Same as Current Management/Proposed Action.

Recommended Mitigation:

Same as Current Management/Proposed Action

3. No Grazing

Direct and Indirect Impacts:

Grazing would cease to be a factor in weed management, but the weeds would continue to be a problem in the area.

Irreversible and Irretrievable commitment of Resources:

The introduction of exotic species, especially noxious weeds is very difficult if not impossible to reverse. Some of the noxious weeds have the potential to totally dominate a site.

Residual:

The same as Direct and Indirect Impacts

Cumulative Impacts:

Same as Current Management/Proposed Action.

Recommended Mitigation:

Same as Current Management/Proposed Action

c. References

Listed at the end of the document

I. NATIVE AMERICAN CONCERNS

a. Affected Environment

The area of the Olancho allotment was inhabited at historic contact by Owens Valley Paiute and Western Shoshone groups. It is on the border of Tubatulabal territory but there is disagreement as to whether Tubatulabal territory crossed the Sierra Nevada and extended to the valley floors below. The primary Tubatulabal homeland was on the west side of the Sierra Nevada. At the time of contact the estimated population of Owens Valley was 1000 to 3000 individuals (Bettinger

1977:5). These people were identified by Kroeber (1925:584-586) as Eastern Mono and by Steward (1933:235) as Owens Valley Paiute, the southernmost branch of the Northern Paiute. Owens Valley Paiute has become the most accepted term. The Owens Valley Paiute were divided into landholding bands centered on territories that lay along streams running east from the Sierra Nevada. Permanent habitation sites (villages) were located near the mouths of the canyons from which the streams emanated. Resource procurement was carried out on a seasonal basis utilizing all environmental zones from the Owens River in the valley up through the canyons into the highlands. (See also Bettinger 1978, 1982 and 1989; Busby *et al* 1979; Fowler *et al* 1995; Liljeblad and Fowler 1986; Norwood *et al* 1980; Grosscup 1977; Steward 1938; and Thomas *et al* 1986 for descriptions of Owens Valley Paiute and Western Shoshone subsistence practices, lifeways, etc.) The southern end of the allotment was inhabited by Western Shoshone people, although this was near the far eastern extent of their homeland. Ethnographic accounts indicate that Western Shoshone subsistence practices were based on exploitation of various floral and faunal resources procured during frequent moves within a territory. For most of the year, people lived in small family or extended family groups, but assembled in villages of several families during the winter months. Six federally-recognized Paiute and Shoshone reservations exist within Owens Valley, with headquarters at Big Pine, Lone Pine, Independence, Bishop (2), and Benton. Those groups who have indicated interest in the area of the allotment have been contacted for consultation. It may be expected that there will be interest in how grazing may affect plants of traditional importance to Paiute and Shoshone culture. There may be areas for which other values are held. If such exist, they will be identified through consultation with the tribal representatives, along with whether or not grazing is seen as an impact to these values.

b. Environmental Consequences

1. Impacts of Current Management/Proposed Action

These impacts will be identified by Paiute and Shoshone people through the consultation process.

2. Impacts of Alternative Number 1

It is likely that any impacts identified by Native Americans for the Proposed Action will apply as well to this alternative.

3. No Grazing

Cessation of grazing would result in cessation of any direct on-going impacts that may be occurring. There may still be effects resulting from permanent damage to resources or areas of concern that will remain even after grazing ceases. These matters must be identified by Native Americans with knowledge of the area.

4. Cumulative Impacts

Grazing has been going on for so long that impacts to Native American values are likely to have a cumulative effect. Some resources of importance may have been eliminated from the environment or seriously degraded, such as populations of native plants. Areas with sacred values may have

been permanently compromised by cattle grazing and attendant activity. These matters must be identified by Native Americans with knowledge of the area.

c. Consultation

Consultation with Native Americans is required under the Protocol Agreement and under various laws and executive orders. Federally recognized and state recognized tribes and individuals whose traditional homelands may be affected by cattle grazing on these allotments have been contacted. Consultation will continue with those who identify concerns about the area Paiute and Shoshone tribes in the Owens Valley who have identified interest in the study area have been contacted but consultation has not begun.

d. References

Listed at the end of the document

J. RECREATION

a. Affected Environment

The public lands in the allotment provide a wide range of outdoor recreational opportunities and experiences including backpacking/hiking, horseback riding, mountain biking, camping, hunting upland game birds, nature study, wildlife viewing, ATV and motorcycle riding, four-wheel driving, rock climbing and target shooting. Annually a Special Recreation Permit for use within the borders of the allotment has been issued to a promoter of dual sport motorcycle tours. Additionally along the western boundary of the allotment are three popular trail heads. These trail heads provide hiking access to Haiwee Pass and Olancho Peak along with a technical climbing route to the top of Olancho Peak.

b. Environmental Consequences

1. Impacts of Current Management/Proposed Action

While participating in casual and permitted recreational pursuits participants may encounter such range improvements as fence lines, closed gates, cattleguards, corrals and water developments as well as encountering herds of cattle on the public lands. While range improvements such as closed gates and cattleguards may delay ones recreational pursuits these impediments do not create a significant impact on recreational opportunities. Conversely the sighting of livestock grazing on the open range is often very intriguing and of interest to visitors and enhances ones recreational experience

2. No Grazing

The elimination of grazing would have little effect on recreational opportunities in the region except for eliminating the experience of seeing cattle on the open range of the “Wild West.”. Until

all range improvements were removed recreational participants may still encounter the remnants of these developments which may delay but not prohibit pursuing one's recreational interest.

3. Cumulative Impacts

No cumulative impacts would be experienced by participants while partaking of recreational opportunities within the allotment.

K. SOCIAL AND ECONOMIC VALUES

a. Affected Environment

The community of Olancha is a traditional rural settlement. Part of its economic base depends on ranching while another sector of the economy depends upon servicing the through traffic on Highway 395. The community of Olancha is not fully developed in the sense of offering a full array of goods and services, and many of its citizens commute long distances to work. It draws labor from other areas in the valley who work at the bottled water plant.

b. Environmental Consequences

1. Impacts of Current Management/Proposed Action

The proposed action would have no effect on the social or economic values of the community.

2. Alternative # 1

Alternative #1 would have no effect on the social or economic values of the community

3. No Grazing

The cancellation of grazing on the allotment would likely erode the social values of those in the community who see value in living in a small western ranching community. It would also impair those businesses and families in the community who count on the Cabin Bar Ranch for business and employment.

4. Cumulative Impacts

The cancellation of grazing would further depress the economic well-being of the community.

L. SOILS

a. Affected Environment

Soils in the area are generally poorly developed, well drained and coarse textured. The soil depth ranges from deeper alluvial materials to very shallow or non existent over the rocky substrate. The soils are susceptible to accelerated erosion from wind and water especially when the surface has been disturbed. Much of the soil has been subject to periodic disturbance due to livestock grazing for 140 years. Additional soil disturbance is occurring as a result of OHV use in the general area plus utility Right-of-way maintenance.

Soil stability was evaluated in the Olancha Common Allotment as part of the Rangeland Health evaluations. Three upland sites were evaluated and the soil surface factor (SSF) in the allotment averaged 14.3 which is in the stable range. One site sampled note erosion as a result of nearby road cut. This site had a SSF of 25 which is in the slight range. Soil impacts were noted at sites where cattle were concentrating. Some of these were developed sites at management facilities such as water developments.

b. Environmental Consequences

1. Impacts of Current Management/Proposed Action

Direct and Indirect Impacts:

Direct impacts to soils would occur through vertical and horizontal displacement and mixing as a result of the grazing activities. Additional direct impacts would include compaction and a reduction in pore space and infiltration rates. Different degrees of impacts would occur to soils from different portions of the grazing operation. Established watering sites concentrate the cattle into a small area resulting in nearly continuous trampling impacts to those sites. The trampling has resulted in increased compaction in the soil surface, elimination of vegetative cover, and destruction or disruption of biological soil crusts at these sites. Additional new impacts to soils at the established sites are unlikely. Some developed water sites in the allotment are nonfunctional resulting in the cattle moving away from the unwatered areas toward the remaining sites that have adequate drinking water. The result has been uneven use pattern developing with numerous areas having no grazing use while others have heavy extended use. Sometimes the use is concentrated around riparian area for watering. In addition the cattle tend to rest and concentrate on the adjacent stream side benches especially later in the season when the temperatures increase causing soil compaction and reductions in vegetative cover for the soils. One of the identified sites, where cattle was a factor in not meeting rangeland health standards, was a riparian area. The proposed range improvement work would solve a number of these problems. These concentration areas away from developed sites would continue to expand and deteriorate unless changes are made.

As opposed to the intense use at concentration areas including watering and management facilities, the general grazing use is an extensive use with the animals and their hoof action spread over large areas. This use can be best characterized as a series of small impacted spots (hoof marks) with large areas of interspace. This use would not result in the loss of vegetative cover or increased

compaction and reduced infiltration rates. It would result in a small increase in wind and /or water erosion potential over the background levels. Wind and water erosion rates are not expected to increase above current levels as a result of the Proposed Action for the areas away from the concentration areas.

Indirect impacts would occur as increase soil erosion from water and wind. The movement of soils by water during high flow events would occur both on the intense use areas and down associated drainages. The movement would involve both removal and deposition. The deposition could occur on the sites, adjacent to the site, along or in roads and through out the drainage. As most of the intense use sites are on shallow slopes, the increased water erosion is expected to be negligible and very localized. Wind erosion could occur on disturbed sites during the common high wind events in the spring. Wind erosion would result in losses of small particles from the surface and increased particulate emissions. The wind erosion losses diminish quickly over time as the small particles are lost from the surface. Erosion rates would only slightly exceed natural rates. The current SSF ratings for the allotment would not be expected to change significantly as a result of the Proposed Action.

Irreversible and Irretrievable commitment of Resources:

Soil losses due to the Proposed Action are irreversible and irretrievable.

Residual:

The Proposed Action would result in a partial loss of soils from some specific sites.

Cumulative Impacts:

The existing grazing activities would contribute little to any soil losses occurring on a regional basis. Many of the existing grazing intense use sites have been used for many years. Most of the regional erosion problems come from poor drainage on and adjacent to roads and rights-of ways.

Recommended Mitigation:

These recommended mitigation are also being considered in the Draft Rangeland Health Determinations for the Olancho Common Allotment:

Modify the grazing management in pastures with important riparian areas or fence out riparian areas to achieve the following:

- Avoid grazing in riparian areas during the warm /hot season to reduce concentration on the riparian areas.
- Reduce grazing pressure during the spring growing season to allow recovery of the key species and protective plant cover in the riparian areas.
- Achievement of rangeland health standards.
Develop more specific triggers for riparian zone monitoring along with specific immediate actions necessary if over use is observed, including the following:

- Add all riparian areas, including the adjacent benches, as key areas for monitoring in the Olancha Common Allotment AMP.
- Add salt grass, sedge, rushes and willows to the key species list along with their proper use factors to the Olancha Common Allotment AMP. The PUFs would be salt grass (30%), sedge (30%), rushes (30%) and willow (10%).

2. Impacts of Alternative #1

Alternative 1:

Direct and Indirect Impacts:

Same as proposed action

Irreversible and Irretrievable commitment of Resources:

Same as Proposed Action.

Residual:

Same as Proposed Action.

Cumulative Impacts:

Same as proposed action.

Recommended Mitigation:

None

3. No Grazing

Direct and Indirect Impacts:

Elimination of grazing would eliminate any additional impacts to soils as a result of cattle grazing. Soils at concentration areas would slowly return to a more natural compaction rate, infiltration rate and stability.

Irreversible and Irretrievable commitment of Resources:

Elimination of cattle will eliminate that commitment of soil resources.

Residual:

The same as Direct and Indirect Impacts.

Cumulative Impacts:

Eliminating grazing activities would make little changes in soil losses occurring in the region. Most of the regional erosion problems come from poor drainage on and adjacent to roads, rights-of-ways, recreational uses and OHV.

Recommended Mitigation:

None

c. References

Listed at the end of the document

M. SPECIAL STATUS PLANTS:

a. Affected Environment

No special status plant species are known in the Olancho Common Allotment area.

N. WASTE, HAZARDOUS OR SOLID

a. Affected Environment

Detailed surveys of hazardous or solid wastes have not been undertaken on this allotment. BLM maintains no records of reportable spills in the allotment. Although use of motorized vehicles and equipment by the livestock operator may have resulted in periodic and scattered spills or releases of fuel and petroleum products in the allotment, none are documented. For this reason we believe that the proposed action and the alternatives would have no affect on hazardous or solid waste.

O. WATER QUALITY, SURFACE AND GROUND WATER

a. Affected Environment

The Olancho Common Allotment is located on the western edge of the Mojave Desert. The climate and annual precipitation is typical for the desert environment. Mean annual perception at Haiwee Reservoir just east of the allotment is 7.8 inches. Large variations in yearly perception volumes are common. Most of the perception comes in the form of rain at the lower elevation and many times snow at the highest elevations. Most of the perception falls between November and mid March. Large summer rain events are not common, but can be quite large causing considerable watershed damage when they do occur. A number of canyons drain through the allotment from the Sierra crest with water draining to the northeast into the Owens Valley or southeast into Rose Valley. Riparian areas are found in nearly all of the canyons and more or less permanent flowing streams exist in most of the major canyons. The stream flow in the canyons is

intermittent in places and tends to disappear at the mouth of the canyons into deep alluvium. A number of seeps and springs occur in the allotment. As noted in the appendix, a number of sites have been developed for livestock water.

The U.S. Geological Survey identified portions of two large watersheds in the allotment. These are the Indian Wells-Searles Valley basin and the Owens Lake basin. Storm water flows from the Olancha Common Allotment end up in one of two closed subbasins. These are Rose Valley and Owens lake. The Final Unified Watershed Assessment (1998) classified the Owens Lake basin as a category 1 (impaired) priority watershed and the Indian Wells-Searles Valley basin as a category 1 (impaired) low priority watershed. The latter classification indicated that that watershed was impaired but of a lower priority to receive Clean Water Action Plan grants from the federal Nonpoint Source Program. A powerline corridor crosses the allotment north to south. In addition an Inyo County road (Sage Flat Road) crosses the allotment east to west. The powerline right-of-way has erosion problems associated with it. These problems are generally the result of poor drainage design with water being dumped down steep slopes causing gullies and sedimentation.

The Lahontan Basin Plan identifies beneficial uses (chapter 2) and water quality objectives (chapter 3) for the surface waters in the allotment. The basin plan lists specific beneficial uses as standards to maintain or meet. For many of the sources, the plan states that beneficial uses includes municipal, agricultural, ground water recharge, recreation 1 & 2, warm water fisheries, cold water fisheries and wildlife. The minor wetlands category has an additional beneficial use of freshwater recharge.

The Clean Water Act and the USEPA classify water pollution from rangelands as nonpoint source pollution (NSP). Management of NSP is through a series of management practices called best management practices (BPS). According to the USEPA, “The restoration or protection of designated water uses is the goal of BMP systems designed to minimize the water quality impact of grazing and browsing activities on pasture and range lands.” Management practices can minimize the delivery and transport of pollutants to surface and ground waters. According to the USEPA, management practices control the delivery of NPS to receiving water resources by:

- minimizing pollutants available;
- retarding the transport and/or delivery of pollutants; and/or,
- remediating or intercepting the pollutant before or after it is delivered to the water resource.

The USEPA has produced guidance titled *National Management Measures to Control Nonpoint Pollution from Agriculture*. In that document section 4E addresses grazing management. The following grazing management measure is taken from that document:

“Manage Rangeland, pasture and other grazing lands to protect water quality and aquatic and riparian habitat by:

1. improving or maintaining the health and vigor of selected plant(s) and maintaining a stable and desired plant community while, at the same time, maintaining or improving water quality and

quantity, reducing accelerated soil erosion, and maintaining or improving soil conditions for sustainability of the resources. These objectives should be met through the use of one or more of the following practices:

- a. maintain enough vegetative cover to prevent accelerated soil erosion due to wind and water;
- b. manipulate the intensity, frequency, duration and season of grazing in such a manner that the impacts to vegetation and water quality will be positive;
- c. ensure optimum water infiltration by managing to minimize soil compaction or other detrimental effects;
- d. maintain or improve riparian and upland vegetation;
- e. protect streambanks from erosion;
- f. manage for deposition of fecal material away from water bodies and to enhance nutrient cycling by better manure distribution and increased rate of decomposition; and,
- g. promote ecological and stable plant communities on both upland and bottom lands sites.

2. excluding livestock, where appropriate, and /or controlling livestock access to and use of sensitive areas, such as streambanks, wetlands, estuaries, ponds, lake shores, soils prone to erosion, and riparian zones through the use of one or more of the following practices:

- a. use of improved grazing management systems (e.g. herding) to reduce physical disturbance of soil and vegetation and minimize direct loading of animal waste and sediment to sensitive areas;
- b. installation of alternative drinking water sources;
- c. installation of hardened access points for drinking water sources;
- d. placement of salt and additional shade, including artificial shelters, at locations and distances adequate to protect sensitive areas;
- e. provide stream crossings, where necessary, in areas selected to minimize the impacts of the crossings on water quality and habitat; and,
- f. use of exclusionary practices, such as fencing (conventional and electric), hedgerows, moats and other practices as appropriate

and

3. achieving either of the following on all rangelands, pastures and other grazing lands not addressed above:

a. apply the planning approach of the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) to implement the grazing land components in accordance with one or more of the following from NRCS: a Grazing Land Resource Management System (RMS); National Range and Pasture Handbook (USDA-NRCS, 1997b); and NRCS Field Office Technical Guide, including NRCS prescribed Grazing 528A;

b. maintain or improve grazing lands in accordance with activity plans or grazing permit requirements established by the Bureau of Land Management, the National Park Service, or the Bureau of Indian Affairs of the U.S. Department of Interior, or the USDA Forest Service; or other federal land manager.”

The text in number 3 above is included in the state of *California guidance called California Nonpoint Source Encyclopedia* (SWRCB 2004) updated July 2004.

b. Environmental Consequences

1. Impacts of Current Management and Proposed Action

Direct and Indirect Impacts:

Range inspections and Rangeland Health Assessments have documented several sites with problems affecting water quality in the allotment. Two sites were identified that did not meet rangeland health standards. One of the sites that did not meet standards was a result of livestock use. The sites not meeting standards are likely to contribute directly or indirectly to the degradation of water quality. All the sites not meeting standards were in riparian areas. On some of these sites, cattle use directly in the water was observed. On these sites cattle were contributing sediments, chemical and bacteriological pollutants directly to the water. The opening of the canopy and spreading out of the water also causes increased water temperatures and higher evaporation rates. It is generally recognized that sediment produced by runoff is the most significant pollutant from rangelands. Upland sites that do not meet health standards have less protective cover to slow overland flow and hold sediment in place. All of these factors would cause the water to not meet water quality standards. The Proposed Action does not represent point source impacts to water quality and no 401 permit is necessary. Impacts from the Proposed Action represent non-point-source impacts which are controlled by the implementation of Best Management Practices (BMP). The proposed action is to provide alternate water sites and institute better livestock management. These are BMP practices. The pending project to fence Olancho Creek is also a BMP. All together, these actions should result in improvements in water quality and the attainment of health standards.

Reduced ground cover on the uplands and destruction of the protective cover in the riparian zones was observed on the Olancho Common Allotment. Both of these factors can contribute to

increased watershed damages during high flow events. In addition, more runoff and less infiltration could result. It is doubtful that grazing use contributed to the watershed damage observed after the flood event in the mid 1980s. Water consumption would not exceed 1.5 acre feet for the grazing season at full stocking rates which is a very small percentage of the water in the area.

Irreversible and Irretrievable commitment of Resources:

Sediments represent soil losses which are very slow to recover. Water losses from the watershed are not recoverable and are not available for plant growth and groundwater recharge.

Residual:

Same as direct impacts

Cumulative Impacts:

Grazing represents only a small portion of the non-point-source pollution in the watershed.

Recommended Mitigation:

Apply best management practices to mitigate water quality problems as follows (these are also being considered in the Draft Rangeland Health Determinations for the Olancha Common Allotment):

Modify the grazing management in pastures with important riparian areas or fence out riparian areas to achieve the following:

- Avoid grazing in riparian areas during the warm /hot season to reduce concentration on the riparian areas.
- Reduce grazing pressure during the spring growing season to allow recovery of the key species and protective plant cover in the riparian areas.
- Achievement of rangeland health standards.

Develop more specific triggers for riparian zone monitoring along with specific immediate actions necessary if over use is observed, including the following:

- Add all riparian areas, including the adjacent benches, as key areas for monitoring in the Olancha Common Allotment AMP.
- Add salt grass, sedge, rushes and willows to the key species list along with their proper use factors to the Olancha Common Allotment AMP. The PUFs would be salt grass (30%), sedge (30%), rushes (30%) and willow (10%).

2. Impacts of Alternative #1

Same as proposed action

Irreversible and Irretrievable commitment of Resources:

Sediments represent soil losses which are very slow to recover.

Residual:

Same as direct impacts

Cumulative Impacts:

Grazing represents only a small portion of the non-point-source pollution in the watersheds and the BMPs are not likely to change the impaired classification for the watersheds.

Recommended Mitigation:

None

3. No Grazing

No impacts to water resources would occur due to cattle grazing.

c. References

Listed at the end of the document

P. WETLANDS/RIPARIAN ZONES

a. Affected Environment

The riparian habitat along Olancha Creek has been deteriorated by cattle use. The Rangeland Health Standard is not being achieved. Evidence of cattle browsing on small willows and young cottonwoods is quite apparent. Haiwee Creek, Hogback Creek, Summit Creek, and Olancha Creek support riparian vegetation that is important to wildlife. Haiwee Creek does not have much riparian habitat. Good oak-willow riparian habitat occurs along an unnamed creek south of Hogback Creek. Hogback Creek has a few large willow trees. Summit Creek has open flowing water and good willow riparian vegetation. An unnamed Creek north of Summit Creek also has good willow riparian areas. Olancha Creek has willows and cottonwoods. All riparian areas appeared healthy except for Olancha Creek where the cattle are concentrated in the north end of the allotment. Indian Springs was used heavily by cattle in the past. However, now the riparian area here that has open water is entirely fenced, and there is no water in the trough outside of the fence. Due to the inaccessibility of water, cattle are no longer attracted to Indian Springs.

b. Environmental Consequences

1. Impacts of Current Management and Proposed Action

Cattle will be grazing from April through June in the Olancho Allotment. Cattle use is intense along Olancho Creek. Since the riparian habitat along Olancho Creek has been deteriorated by cattle use and since the Rangeland Health Standard is not being achieved, the entire length of Olancho Creek within the BLM allotment will be fenced in the spring of 2005. This protection will prevent further damage of riparian vegetation along a mile of the creek and will allow for recovery. After the proposed fence encloses the Olancho Creek riparian area, cattle grazing will not have an adverse impact on the riparian areas in the allotment. The other riparian areas are in good condition. Cattle will be able to access the water in Olancho Creek in 3 locations: below the fenced area; at the road crossing; and above the fencing on U.S. Forest Service land.

To prevent potential adverse impacts to the riparian along Summit Creek, a pipeline and trough should be installed to draw cattle away from the creek. This range improvement would protect and enhance riparian habitat.

Livestock utilization levels in riparian areas need to be monitored, and any over-utilization needs to be identified.

2. Impacts of Current Management if different than proposed action

Current Management is not different than proposed management. Possible changes could be the fence around Olancho Creek and a water trough near Summit Creek. Both of these actions would benefit the riparian and wetland areas.

3. No Grazing

No adverse impacts if grazing is eliminated.

4. Cumulative Impacts

After the fence is constructed around the riparian vegetation along Olancho Creek, no cumulative impacts on riparian vegetation are expected .

c. References

Listed at the end of the document

Q. WILD AND SCENIC RIVERS

a. Affected Environment

The proposed action and alternatives would have no affect on wild and scenic rivers because there are no rivers so designated within the allotment.

R. WILDERNESS

a. Affected Environment

The proposed action and alternatives would have no affect on wilderness because there are no wilderness areas in the allotment.

S. WILD HORSES AND BURROS

a. Affected Environment

The proposed action and the alternatives would have no affect on wild horses and burros because there are no herd management areas in the allotment.

T. WILDLIFE (T&E)

a. Affected Environment

The riparian habitat along Olancho Creek has been deteriorated by cattle use. The Rangeland Health Standard is not being achieved. Evidence of cattle browsing on small willows and young cottonwoods is quite apparent. Key forage species used by both wildlife and cattle are *Graya spinosa* (Hopsage), *Eurotia lanata* (Winterfat), *Ephedra nevadensis* (Mormon Tea), *Acamptopappus sphaerocephalus* (Goldenhead), *Elymus elymoides* ssp. *elymoides* (Bottlebrush or Squirreltail), and *Achnatherum speciosa* (Desert needlegrass), and are found on the alluvial plains below the eastern escarpment of the Sierra Nevada Mountains. Haiwee Creek, Hogback Creek, Summit Creek, and Olancho Creek provide water to the allotment. These creeks support riparian vegetation that is important to wildlife. Haiwee Creek does not have much riparian habitat. Good oak-willow riparian habitat occurs along an unnamed creek south of Hogback Creek. Hogback Creek has a few large willow trees. Summit Creek has open flowing water and good willow riparian vegetation. An unnamed Creek north of Summit Creek also has good willow riparian areas. Olancho Creek has willows and cottonwoods. All riparian areas appeared healthy except for Olancho Creek where the cattle are concentrated in the north end of the allotment. Indian Springs also was used heavily by cattle in the past. However, now the riparian area here that has open water is entirely fenced, and there is no water in the trough outside of the fence. Due to the inaccessibility of water, cattle are no longer attracted to Indian Springs.

A portion of the Monache mule deer herd (*Odocoileus hemionus*) use the allotment as winter range. The Monache deer herd includes about 2000 animals, most of which utilize the Olancho winter range (Rocky Thompson CADFG pers. corresp.). The Monache deer herd is composed of both the California mule deer (*Odocoileus hemionus californicus*) and the Inyo mule deer (*Odocoileus hemionus inyoensis*). This herd uses 3 different winter ranges designated as Haiwee, Cottonwood, and Long Valley. The Olancho Allotment is within the Haiwee winter range area, which is by far the most important of the 3 winter ranges (Reser and Consoli, 1989). The Haiwee

winter range extends along the base of the Sierra escarpment from Olancha Creek 30 miles south to 5-Mile Creek. Winter range elevations extend from 4000 to 7500 ft. Deer begin to arrive on winter range by mid-November. During the winter months of December through February, the deer browse on shrubs such as bitterbrush and sagebrush on mid-elevation north-facing slopes. With spring rains, usually in early March, the valley floor produces abundant forbs. The lower elevations then become an important feeding area for pregnant does prior to migration. Between mid-April and early May the deer head up to higher elevations where the fawning occurs (Reser and Consoli, 1989). Thus, March through early May is the period when the Olancha Allotment is most important to deer. Fawn survival of the Monache herd fluctuates annually with habitat condition which is mainly controlled by winter and spring moisture. Long-term weather patterns affect the productivity of forage species, thus determining the physical condition of the does prior to parturition. The aqueduct project that was completed in 1913 has dried the valley bordering the eastern slope of the Sierras by lowering water tables. Because of this drying, the Monache deer herd no longer inhabit a large portion of their former winter range (Reser and Consoli, 1989).

It is possible that a salamander species in the genus *Batrachoceps* and/or *Hydromantes* occurs along Olancha or Summit Creeks. *Batrachoceps* occurs in 9-mile canyon to the south and *Hydromantes* occurs to the north of the Olancha Allotment. Amphibian surveys in the riparian areas of the Olancha Allotment would help in understanding the ranges of these species.

The springsnail, *Pyrgulopsis wongii*, occurs in the Inyo National Forest and in springs in the Owens Valley. This species could occur in the Olancha Allotment. Aquatic macroinvertebrate surveys would help to describe the range of this species. California Dept. of Fish and Game Natural Diversity Database (CNDDB) ranks this species as an extremely endangered California endemic.

Threatened or Endangered Species: The allotment has not been surveyed for wildlife species. A survey of aquatic invertebrates is planned to assist in assessing effects of grazing on water quality and aquatic habitats. The allotment is not within desert tortoise habitat.

The Olancha allotment lies within the range of the Mohave ground squirrel (MGS) (*Spermophilus mohavensis*), which is a California state threatened species. In the northern portion of its range, the MGS feeds on the leaves, seeds, and fruits of shrubs when annual plants are not available. Mohave ground squirrels seem to prefer spiny hopsage (*Grayia spinosa*), winterfat (*Krascheninnikovia lanata*), and saltbush (*Atriplex* sp.). The MGS typically emerges from hibernation between mid-February and mid-March. Summer aestivation generally begins sometime between July and September, but may begin as early as April or May during drought conditions (Leitner et al., 1995). Reproductive success of the MGS depends on the amount of fall and winter rains and the resulting growth of annual forage. Leitner and Leitner (1992) suggest that a crop of about 1 gram / sq ft may be necessary for MGS reproduction. If rainfall is not sufficient, annual herbaceous plants are scarce. At such times, the MGS is unable to store enough fat and the species does not breed. By not reproducing, the MGS retains sufficient body fat to survive the winter. The MGS uses burrows at the base of shrubs for cover and builds its nest in the burrow system. A litter of about 6 young are born between March and May with a peak in April (Burt 1936, Recht 1977).

b. Environmental Consequences

Impacts of Current Management and Proposed Action

Cattle will be grazing from April through June in the Olancho Allotment. Cattle use is intense along Olancho Creek. Since the riparian habitat along Olancho Creek has been deteriorated by cattle use and since the Rangeland Health Standard is not being achieved, the entire length of Olancho Creek within the BLM allotment will be fenced in the in 2006 and 2007 . This protection will prevent further damage of riparian vegetation along a mile of the creek and will allow for recovery. After the proposed fence encloses the Olancho Creek riparian area, cattle grazing will not have an adverse impact on the riparian areas in the allotment. The structural diversity and cover of the riparian vegetation will increase, providing habitat for more bird species including potentially the willow flycatcher. The narrow width of the stream channel, however would limit the expansion so that perhaps only a few pairs of flycatchers could move in. The stream channel itself would become more stable as the roots of willows and cottonwoods expand to form mats to hold the soil in place. This will allow the Rangeland Health Standard to be achieved. The other riparian areas are in good condition. Cattle will be able to access the water in Olancho Creek in 3 locations: below the fenced area; at the road crossing; and above the fencing on U.S. Forest Service land.

To prevent potential adverse impacts to the riparian along Summit Creek, a pipeline and trough should be installed to draw cattle away from the creek. This range improvement would protect and enhance habitat for any rare species that could occur in the riparian areas, such as salamanders and springsnails. In addition, it would protect riparian bird habitat which is especially critical in desert regions.

The period of grazing coincides with the time that the Mohave ground squirrel (MGS) is active. Cattle and the MGS will be competing for forage. A grazing system that results in light utilization of edible shrubs and does not deplete annuals would provide the squirrels with sufficient nutrition and could have minimum impacts on the population. Studies conducted by Phil Leitner in the Coso Range showed some dietary overlap between cattle and MGS, especially for shrub foliage like winterfat and spiny hopsage. The following information was supplied by consulting with Phil Leitner. If the food resource is abundant, enough forage would be present for both MGS and cattle. However, there is the potential for adverse effects from competition for winterfat and spiny hopsage in dry years when other forage may not be abundant. The best strategy is to evaluate how much of the annual shrub production is taken by cattle (field surveys) and then to apply a standard that would leave enough for MGS. By adjusting stocking levels so that excessive utilization by cattle is avoided (even in dry years), enough food resources could be reserved to support the MGS.

Competition between deer and cattle could deplete preferred deer forage and reduce nutritional levels of their diet. Studies have shown that poorly nourished deer have very low fawn survival, compared to those on high quality diets. Deer use of early spring forage in riparian areas should be taken into consideration when developing a grazing strategy. Since deer use this area primarily in the winter, the presence of sufficient winter forage is of greatest concern. Since most of the allotment is only lightly grazed (except for the area between Summit and Olancho Creeks), the

impact on deer should be minimal. Also, deer will benefit from healthy riparian areas that are in the allotment. Livestock utilization levels in both riparian areas and the uplands need to be monitored, and any over-utilization needs to be identified.

Cattle use in the riparian areas should be monitored to prevent adverse impacts to salamanders in the genera *Batrachocephalus* and *Hydromantes* in case they do live in here. As previously mentioned, amphibian surveys in the riparian areas of the Olancho Allotment would help in understanding the ranges of these species and whether cattle could affect their habitat.

The springsnail, *Pyrgulopsis wongii*, could occur in the Olancho Allotment. An aquatic macroinvertebrate survey is planned. The survey will indicate if this species is present and if it could be impacted by cattle. If cattle use in the riparian areas is monitored and the water quality is maintained at a high level, the springsnail would not be adversely affected by grazing.

2. Impacts of Alternative 1

Alternative 1 is to change the months of cattle grazing to March, April, and May. This alternative would have negative impacts on the Monache deer herd since the deer do not migrate up into the mountains until mid-April through early May. Under Alternative 1, cattle would be competing with deer for forage during March, April, and early May; while under the proposed action of grazing in April, May, and June, cattle would compete with deer in April, and early May. According to Rocky Thompson of the CA Dept of Fish and Game, "The quality of winter range and the forage available to the Monache deer through May is critical to herd productivity. Placing cattle on the range prior to April will negatively impact the herd. We do have evidence that the more quality forage available to the does, the greater their fawn survival will be. The deer would benefit from a grazing regime which started in May. April is the very earliest cattle should be allowed on the winter range. Certainly, Alternative 1 is more detrimental to the deer than the current management. Grazing in April, May, and June may be compatible with deer use if the grazing is relatively light. That timing and intensity would be my best recommendation regarding deer habitat on the grazing allotment."

3. No Grazing

No adverse impacts if grazing is eliminated.

4. Cumulative Impacts

After the fence is constructed around the riparian vegetation along Olancho Creek, no cumulative impacts are expected on riparian species. Cumulative impacts on the mohave ground squirrel (MGS) will be avoided if cattle stocking rates are such that enough winterfat and spiny hopsage forage is reserved for the MGS.

c. Consultation

Phil Leitner concerning competition for forage between cattle and Mohave Ground Squirrels

Alisa Ellsworth of the CA Dept of Fish and Game concerning potential impacts of cattle grazing on deer

Rocky Thompson of the CA Dept of Fish and Game concerning potential impacts of cattle grazing on deer

Durham Giuliani concerning salamanders in Olancho Creek

d. References -

References listed at the end of the document.

U. VEGETATION

a. Affected Environment

the Olancho Common Allotment is located at the southwestern edge of the Great Basin Floristic Province as described in the *Jepson Manual, Higher Plants of California*. It is adjacent to the California Floristic Province and the Desert Floristic Province. This has resulted in components from all three of these provinces occurring in the area. Most of the allotment supports what Sawyer and Keeler-Wolf in *A Manual of California Vegetation* describe as vegetation series (now called alliances) dominated by shrubs. These shrub series typically support an herbaceous layer that may include less than a dozen species of perennial grasses and forbs. In addition the herbaceous layer usually includes an extremely diverse number of annual forbs and up to five species of annual grasses. The riparian vegetation series are the most complex in that they can have multiple tree layers in addition to the shrub layer and the herbaceous layer. In addition the riparian zones with free water have an additional layer below the water surface

The Olancho Common Allotment consists of a narrow strip along the eastern toe of the Sierra Nevada Mountains with a small variation in elevation. This has resulted in a low number of different vegetation series in the area. Three health assessments have been conducted on upland sites where vegetation attributes were sampled in the Olancho Common Allotment. Twenty-nine species of perennial plants were encountered in the upland transects. The average diversity on the transects was sixteen different species. Several of the vegetation series identified in the allotment are considered transitional. These series include or are dominated by short lived species. According to Sawyer and Keeler-Wolf, these series can be an indicator of past and/or current disturbances. The disturbances can be either man caused (like grazing, or maintenance on rights-of-ways and roads) or natural (like fire or flood events). Examples of all of these disturbances were observed in the Olancho Common Allotment. Among the short lived species characteristic of these series is California buckwheat and cheese bush. The creosote bush (*Larrea tridentata*) and Joshua trees (*Yucca brevifolia*) are among the long lived species occurring in the area.

Historically, the vast majority of cattle activity on Olancho Common has been light (< 30% utilization). Areas attaining moderate cattle activity (30-60% utilization) has occurred between the

old railroad siding and the Los Angeles Aqueduct to the west of the village of Olancho, on the flats between Summit Creek and Hogback Creek just to the west of U.S. Route 395, and at Haiwee Creek inlet and the trough down the pipeline. High cattle activity has historically been present around Indian Spring when the trough and pipeline were working.

The forage consists of *Grayia spinosa* (Hopsage), *Eurotia lanata* (Winterfat), *Ephedra nevadensis* (Mormon Tea), *Acamptopappus sphaerocephalus* (Goldenhead), *Sitanion hystrix* (Bottlebrush or Squirreltail), and *Stipa speciosa* (California needlegrass), and is found on the alluvial plains below the eastern escarpment of the Sierra Nevada Mountains. All grazing is subjected to limits of use on these species.

The creosote bush series is one common vegetation series in the allotment. Common perennial species found in the Creosote bush Series include Creosote bush, Burro-bush or Bursage (*Ambrosia dumosa*), Winterfat (*Ceratoides lanata*), Spiny Hop-Sage (*Grayia spinosa*), Desert needlegrass, Indian ricegrass (*Achnatherum (Oryzopsis) hymenoides*) and Varied bluegrass (*Poa secunda*). The Joshua tree series is also found in the allotment. This series is similar to the Creosote Series with the inclusion of emergent Joshua trees. This series typically occurs at the upper edge of the Creosote bush Series where there is more moisture. The Joshua tree woodland was found to be the most productive vegetation series in the CDCA Plan forage inventories. Common great basin species such as big sage (*Artemisia tridentata*) and spiny menodora (*Menodora spinescens*) also occur in portions of the area.

Most plants in the allotment are growing-renewable resources which can tolerate some level of use on a sustained basis. Annual (ephemeral) plant species are the most tolerant of grazing. They will continue to thrive as long as they have been allowed to set seed and the site has not been unduly modified. Many of the annuals can be completely consumed once the seed has dropped. The perennial plants have different needs that make them more susceptible to grazing. Much of the perennial plant's production is directed at maintenance of energy reserves which are necessary to sustain future years' initial growth and flowering. Of secondary importance is the production of seeds. This means that perennial plants need to maintain an adequate level of photosynthetic processes through the year until they go dormant. Grazing removes photosynthetic material and stored energy from plants. The amount of material that can be removed from a plant depends upon the species, the time of year, overall health of the plant and growing conditions (soil moisture and nutrients). This amount of a perennial plant that can be safely removed on a sustained basis is referred to as the proper use factor (PUF). It is expressed as a percent of the current year's growth that can be removed on a sustained basis. Each species has its own PUF. These can run from 50% for some grass species to 10% or less for some shrub species. These PUFs were developed for more average years and should be considered excessive in draught years. The CDCA Plan contains PUFs and states that exceeding the PUFs would lead to moving or removing of livestock.

The California Desert Conservation Area Plan and Environmental Impact Statement addressed cattle grazing in the Olancho Common Allotment. Among the grazing issues addressed was the estimated forage production, allocations of forage, and limits on grazing use (proper use factors). The CDCA Plan estimated the perennial forage production to be approximately 1009 AUMs. Over 300 AUMs of the forage was reserve by the Plan for wildlife, steep slope exclusions and condition improvement. The CDCA Plan allocated 606 AUMs of forage to cattle use.

b. Environmental Consequences

1. Impacts of Current Management and Proposed Action

Direct and Indirect Impacts:

Livestock use impacts vegetation directly through removal by grazing and/or browsing and by trampling. A number of factors affect the impact of cattle on vegetation. These factors include (1) vegetation characteristics such as palatability of the plants, which varies seasonally, the response of the plant to grazing (increaser, decreaser or invader), phenology, the physical characteristics of the plant, distribution of the plants and abundance of desirable plants, (2) factors which affect accessibility such as slopes, distance from water and terrain, (3) grazing animal characteristics such as aggressiveness in working steep terrain, nutritional needs and preference for certain species, and (4) management factors such as choice of livestock type, management structures, moving animals, season of use, stocking rates and the use of salt and other supplements. Indirect impacts to vegetation occurs through the modification of the rangeland both biologically and physically which may change dominance, eliminate some species, change germination conditions, remove sheltering, reduce seedling survival and allow invasive weeds to encroach into the area.

Poor distribution of cattle in the Allotment has also been noted. Observations of cattle movements and vegetation indicate that cattle tend to concentrate near water. Utilization studies and Rangeland Health assessments both noted this problem. The health assessments noted a lack of key species, poor reproduction and trampled vegetation at riparian sites. As a result, of the two riparian sites assessed, one at Olancha Creek was judged to not meet Rangeland Health Standards due to cattle use. A number of factors contribute to the problems. These included a natural preference of the cattle for grazing the key species, grazing the same areas every year during the spring growing season, the tendency of the cattle to concentrate and stay near water during the warm season and a dependency of the cattle to water on the streams due to nonfunctional water improvements. The proposed action to repair water developments and rotate livestock along with an anticipated fence around Olancha Creek would lead to the allotment meeting rangeland health standards. Under the current situation without the changes, continued degradation of concentration areas, especially those near water, will occur in the allotment and it would continue to not meet standards.

Irreversible and Irretrievable commitment of Resources:

The vegetation removed by grazing is renewable on a sustained basis at moderate grazing levels. Heavy use sites could start recovery if the impacting uses are modified or removed. This recovery could result in functional stable sites within 10 years. Recovered sites may or may not ever resemble previous vegetation composition

Residual:

There would be continued utilization of renewable vegetation resources.

Cumulative Impacts:

Riparian corridor vegetation is a community of limited distribution in the region. Continued overuse of the community in the Olancha Common Allotment would be of great importance on an overall basis in the region.

Recommended Mitigation:

These recommended mitigations are also being considered in the Draft Rangeland Health Determinations for the Olancha Common Allotment:

Modify the grazing management in pastures with important riparian areas or fence out riparian areas to achieve the following:

- Avoid grazing in riparian areas during the warm /hot season to reduce concentration on the riparian areas.
- Reduce grazing pressure during the spring growing season to allow recovery of the key species and protective plant cover in the riparian areas.
- Achievement of rangeland health standards.

Develop more specific triggers for riparian zone monitoring along with specific immediate actions necessary if over use is observed, including the following:

- Add all riparian areas, including the adjacent benches, as key areas for monitoring in the Olancha Common Allotment AMP.
- Add salt grass, sedge, rushes and willows to the key species list along with their proper use factors to the Olancha Common Allotment AMP. The PUFs would be salt grass (30%), sedge (30%), rushes (30%) and willow (10%).

2. Impacts of Alternative #1

Direct and Indirect Impacts:

See proposed action

Irreversible and Irretrievable commitment of Resources:

See proposed action

Residual:

See proposed action

Cumulative Impacts:

See proposed action

Recommended Mitigation:

See proposed action

3. No Grazing

Direct and Indirect Impacts:

No annual or perennial vegetation would be trampled or removed by cattle. There would not be any expected large scale changes in vegetation composition on an overall basis. Cover and vigor of key species would increase. Standing Biomass levels could increase. Additional biomass could increase the incidence and/or intensity of fire. Changes would occur at high use site especially those sites that have not met Rangeland Health Standards. These sites would become functional and physically stable and later vegetation recovery would occur. Full recovery may not include matching the exact original vegetation.

Irreversible and Irretrievable commitment of Resources:

With no grazing there would be no use of vegetation.

Residual:

The same as Direct and Indirect Impacts

Cumulative Impacts:

Grazing would cease to contribute to impacts to vegetation in the Olancha Common Allotment. There would continue to be human and natural impacts to vegetation at site specific locations.

Recommended Mitigation:

Develop and implement rehabilitation and protection for the developed sites to aid recovery.

c. References

Listed at the end of the document

CHAPTER 4

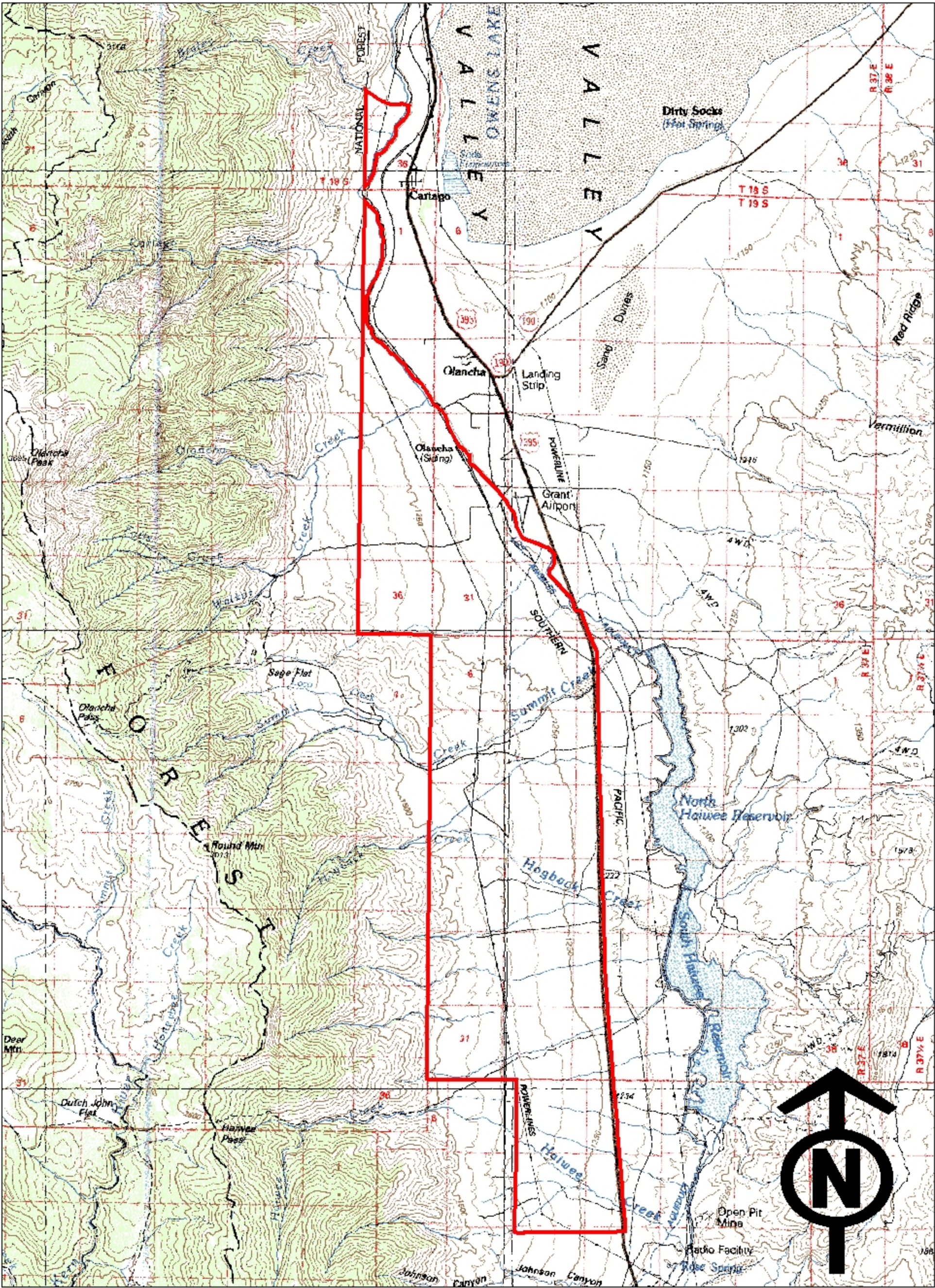
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	Name	Title

<u>Participating Staff</u>	<u>Resource Specialty</u>
Donald Storm	Archeologist
Glen Harris	Soil, Air, and Water, & Vegetation
Shelley Ellis	Wildlife Biologist
David Sjaastad	Rangeland Management Specialist
Craig Beck	Recreation Specialist
Peter Graves	Environmental Coordinator
David Sjaastad	Resources Branch Chief

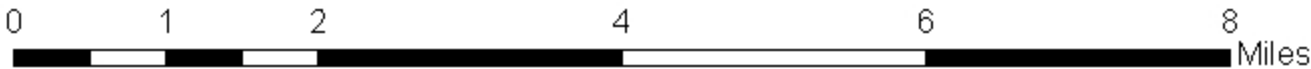
APPENDIX 1
ALLOTMENT MAP

Olancha Common Allotment



Allotment Boundary

1:80,000



APPENDIX 2
RANGE IMPROVEMENTS

Range Improvement	Location	Functional/Not Functional	Mitigation Description
Hogback Spring, 5035	T20S, R37E, S18	Unknown	
South Olancha Tanks & Troughs, 5294	T20S, R37E, S20	Functional	
Haiwee Pipeline Trough 5336	T21S, R37E, S4	Functional	Maintain so that rancher can alternate north and south pastures every other year.
Hogback Creek Pipeline & Trough, 5351	T20S, R37E, S19	Non-Functional	Reconstruct in order to distribute cattle in south pasture.
Indian Springs Pipeline 5403	T20S, R37E, S6	Non-Functional	Reconstruct in order to distribute cattle in north pasture.
Rose Spring Drift Fence, 5477	T21S, R37E,	Functional	
Hogback Spring Protective Fence, 5481	T20S, R37E, S19	Functional	
Olancha Allotment Fence, 5488	T19S, R37E, S32	Non-functional	
CC Pearce Holding Corral, 5584	T20S, R37E, S18	Non-functional	
Fall Road Cattleguard, 5697	T19S, R37E, S18	Functional	
Walker Creek Road Cattleguard, 5697	T19S, R37E, S30	Functional	
Olancha Cattleguard	no information		
Sage Flat Drift Fence <u>Proposed</u>	T20S, R37E, S7	Proposed	Distribution of Cattle --prevent drift of cattle between north and south pastures.

APPENDIX 3
FORAGE SPECIES PROPER USE FACTORS

APPENDIX 3 PROPER USE FACTORS FOR FORAGE SPECIES IN THE RIDGECREST FIELD OFFICE AREA

Proper Use Factors (P.U.F.'s) are related as a percentage of plant that is allowed to be grazed. Usually an average is taken from sampling a local population at a site.

PLANT- SCIENTIFIC NAME	COMMON NAME	P.U.F.
TREES & SHRUBS		
<i>Acamptopappus sphaerocephalus</i>	Goldenhead	10
<i>Ambrosia dumosa</i>	Burrobush	10
<i>Artemesia spinescens</i>	Budsage	20
<i>Artemesia tridentata</i>	Great Basin Sage	<5
<i>Atriplex canescens</i>	Four-wing Saltbush	40
<i>Atriplex confertifolia</i>	Shadscale	10
<i>Atriplex hymenelytra</i>	Desert Holly	<5
<i>Atriplex polycarpa</i>	Cattle Spinach	20
<i>Chrysothamnus nauseosa</i>	Rubber Rabbit Brush	<5
<i>Chrysothamnus viscidiflorus</i>	Green Rabbit Brush	<5
<i>Coleogyne ramosissima</i>	Blackbrush	<5
<i>Encelia farinosa</i>	Brittlebrush	<5
<i>Ephedra nevadensis</i>	Nevada joint fir, Mormon Tea	30
<i>Ephedra viridis</i>	Mountain joint fir	20
<i>Ericameria cooperi</i>	Goldenbush	0
<i>Ericameria linearifolius</i>	Linear-leaved Goldenbush	<5

<i>Eriogonum fasciculatum</i>	California buckwheat	20
<i>Eriogonum wrightii</i>	Wright's buckwheat	40
<i>Grayia spinosa</i>	Spiny Hopsage	30
<i>Gutierrezia sarothrae</i>	Snakeweed	0
<i>Hymenoclea salsola</i>	Cheesebush	<5
<i>Isomeris arborea</i>	Bladder-pod	10
<i>Juniperus californica</i>	California Juniper	0
<i>Juniperus occidentalis</i>	Western Juniper	0
<i>Juniperus osteosperma</i>	Utah Juniper	0
<i>Krascheninnikovia lanata</i>	Winter Fat	40
<i>Larrea tridentate</i>	Creosote bush	0
<i>Lepidium fremontii</i>	Desert Alyssum	<5
<i>Lepidospartum squamatum</i>	Scale-broom	<5
<i>Lycium andersonii</i>	Anderson thornbush	10
<i>Lycium cooperi</i>	Peach thornbush	10
<i>Machaeranthera tortifolia</i>	Desert aster	20
<i>Menodora spinescens</i>	Spiny menodora	20
<i>Opuntia basilaris</i>	Beavertail cactus	0
<i>Psoralea fremontii</i>	Indigo brush	10
<i>Salazaria mexicana</i>	Paperbag bush	10
<i>Salix lavaegata</i>	Red Willow	10
<i>Salvia dorii</i>	Purple Sage	10
<i>Senna armata</i>	Desert cassia	<5

<i>Stephanomeria pauciflora</i>	Desert Straw	30
<i>Tetradymia spinosa</i> var. <i>longispina</i>	Cotton felt-thorn	0
<i>Yucca brevifolia</i>	Joshua tree	<5

FORBS

<i>Mirabilis bigelovii</i>	Wishbone bush	40
<i>Sphaeralcea ambigua</i>	Desert Mallow	40

GRASSES

<i>Achnatherum hymenoides</i>	Indian Rice Grass	50
<i>Achnatherum speciosa</i>	Desert Needlegrass	50
<i>Distichlis spicata</i>	Saltgrass	30
<i>Erioneuron pulchellum</i>	Fluffgrass	20
<i>Hilaria jamesii</i>	Galleta grass	50
<i>Poa scabrella</i>	Pine bluegrass	50
<i>Sitanion hystrix</i>	Squirrel-tail	40
<i>Sporobolus airoides</i>	Alkali Sacaton	40

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1. Appendix XIII, Volume F of Final Environmental Impact Statement and Proposed Plan for the California Desert Conservation Area, Sept. 1980
2. Plant Checklist for BLM Ridgecrest, CA Field Office Area, 2006

APPENDIX 4

LIVESTOCK GRAZING AMENDMENT

SUPPLEMENTAL PROCEDURES FOR LIVESTOCK GRAZING PERMIT/LEASE RENEWALS

A CULTURAL RESOURCES AMENDMENT
TO
THE STATE PROTOCOL AGREEMENT

BETWEEN

CALIFORNIA BUREAU OF LAND MANAGEMENT
AND
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER

The purpose of this amendment is to address the National Historic Preservation Act (NHPA) Section 106 compliance procedures for processing approximately 400 grazing permit/lease (hereafter “permit”) renewals scheduled for 2004 through 2008. This amendment shall cover grazing permit renewals for livestock as defined in 43 CFR 4100.0-5 as “....domestic livestock – cattle, sheep, horses, burros, and goats.” The following procedures will allow for renewal of the permits while maintaining compliance with the NHPA. Alternative approaches to this amendment may be developed by individual Field Offices, but such approaches shall fall under the Section 106 regulations of the NHPA (36 CFR Part 800) and shall require individual Field Office consultation with the SHPO.

These supplemental procedures are an amendment to the State Protocol dated April 6, 1998, which is scheduled for termination on October 25, 2004. These supplemental procedures will remain in effect when that Protocol is terminated and will become an amendment to a successor Protocol document.

This amendment deviates from the Protocol in *Section VI. Thresholds for SHPO Review*, which states, “*BLM shall complete the inventory, evaluation and assessment of effects and document all findings, including negative inventories and no effect determinations, in BLM files before proceeding with project implementation.*” This amendment would allow for renewal of an existing grazing permit prior to completing all NHPA compliance needs as long as Protocol direction, the BLM 8100 Series Manual guidelines (Protocol Amendment F), and the following specific stipulations are followed:

I. Planning

Grazing permit renewals of any acreage size shall be scheduled for cultural resource compliance coverage over the next ten years. Such long term management includes scheduling for inventory, evaluation, treatment, and monitoring, as appropriate. Schedules for inventories of all renewals to

be covered by this amendment shall be delineated by each participating Field Office and submitted to the SHPO and the State Office at the first annual reporting cycle for FY 2004.

This amendment shall only apply to the reissuance of grazing permit authorizations and existing range improvements. All new proposed undertakings for range improvements shall follow the established procedures within the Protocol or 36 CFR 800, the implementing regulations for Section 106 of NHPA.

II. Inventory Methodology

To address the impacts of grazing on cultural resources, a Class II sampling or reconnaissance survey strategy shall be devised by the cultural resource specialist in consultation with range staff which focuses inventory efforts on areas where livestock are likely to concentrate within areas of high sensitivity for cultural resource site locations. Congregation areas where it has been shown that the greatest levels of impact are likely to occur are generally around springs, water courses, meadows, and range improvement areas such as troughs and salting areas.

All existing range improvements within areas of high sensitivity for the location of cultural resource sites shall be inventoried. However, due to the fact that cattle trailing occurs along fence lines and the area of impact is limited to a one meter wide swath and impacts to cultural resources are generally restricted to this corridor, existing linear improvements will not be inventoried except in areas of high sensitivity for the location of cultural resource sites.

Salting areas may change from season to season making locating these areas problematic. Salting locations will be assessed by the cultural resource specialist in consultation with range staff and the permittee. The permittee will be asked to provide a map designating salting areas and these locations will be inventoried if they occur in areas where the probability for the occurrence of cultural resources is high. All livestock loading and unloading areas and corral areas will also be inventoried within areas of high sensitivity for the location of cultural resources.

A Class I records search will also be conducted for each allotment to ascertain previously recorded site locations and areas of prior survey coverage which can be accepted as meeting current standards. Sites located within livestock congregation areas will be visited to evaluate grazing impacts.

All areas identified for inventory in the survey strategy shall be covered intensely. All unrecorded site locations will be recorded and a report of findings for each allotment will be completed. These investigations shall only address public lands administered by BLM. Private, state and county in-holdings will not be evaluated.

III. Tribal and Interested Party Consultation

Field Offices will be responsible for contacting and consulting with Tribes and interested parties as outlined in 36 CFR 800 and the 8120 manual guidelines. This will also meet BLM government-to-government responsibilities for consultation.

IV. Evaluation

Determinations of eligibility to the National Register of Historic Places shall only be undertaken on sites or properties where it can be reasonably ascertained or it is ambiguous that range activities will continue to impact sites and further consultation with SHPO could be required.

V. Effect

A. Range undertakings where historic properties are not affected may be implemented under the Protocol without prior consultation with SHPO. These undertakings shall be documented in the Protocol Annual Report.

B. Range undertakings where historic properties are identified within APEs, and where historic values are likely to be affected or diminished by project activities, require consultation with SHPO, and ACHP if necessary, on a case-by-case basis, pursuant to 36 CFR 800.5-6.

VI. Treatment

Standard Protective Measures can include but are not limited to:

A. Fencing or enclosure of livestock from the cultural resource sufficient to ensure long-term protection, according to the following specifications:

1. the area within the enclosure must be inventoried to locate and record all cultural resources; and
2. the enclosure (i.e.) fence must not divide a cultural resource so that a portion is outside of the fence; and
3. the cultural resource specialist will determine the appropriate buffer to be provided between the cultural resource and its enclosing fence.

B. Relocation of livestock management facilities / improvements at a distance from cultural resources sufficient to ensure their protection from concentrated grazing use.

C. Removal of natural attractants of livestock to a cultural resource when such removal, in the judgment of the cultural resource specialist, will create no disturbance to the cultural resource (e.g. removing vegetation that is providing shade).

D. Removal of the area(s) containing cultural resources from the allotment.

E. Livestock herding away from cultural resource sites.

F. Use salting and/or dust bags or dippers placement as a tool to move concentrations of cattle away from cultural sites.

G. Locating sheep bedding grounds away from known cultural resource sites.

H. Other protective measures established in consultation with and accepted by SHPO.

The Standard Protective Measures defined above may be used to halt or minimize on-going damage to cultural resources. If the standard protection measures can be effectively applied, then no evaluation or further consultation with SHPO on effects will be necessary. The adopted Standard Protective Measures shall be added to grazing permit “Terms and Conditions” as appropriate for each grazing permit issued or reissued as fully processed permits (completed NEPA analysis, consultation, and decision). The “Terms and Conditions” for each permit may be modified by the addition, deletion, or revision of Standard Protective Measures as described in Section VII of these Supplemental Procedures.

VII. Monitoring

A. Field Offices shall adopt the following monitoring guidelines:

1. monitoring shall be conducted yearly and documented to ensure that prescribed treatment measures are effective; and
2. when damaging effects to cultural resources from grazing activities are ambiguous or indeterminate, Field Offices shall conduct monitoring, as necessary, to determine if degrading effects are resulting from grazing activities and if they are continuing to affect the characteristics that may make properties eligible to the NRHP or if they are otherwise adversely affecting the values of cultural resources.

B. When monitoring has yielded sufficient data to make effect determinations, the following apply:

1. When no additional degrading damage will likely occur because standard treatment measures are adequate to prevent further damage from rangeland management activities, SHPO consultation on a case-by-case basis is unnecessary.
2. When no additional degrading damage will likely occur, even without implementation of standard treatment measures, then no further treatment consideration of those resources is necessary, even if past grazing impacts to the ground surface are evident.

3. When additional degrading damage will likely occur, mitigation of adverse effects shall be addressed on a case-by-case basis, pursuant to 36 CFR 800.5-6.

When monitoring results or case-by-case consultation result in a determination concerning addition or deletion of Special Treatment Measure(s) for a specific allotment, then that Measure(s) will be added to, or deleted from, the Terms and Conditions of the fully processed permit for that allotment.

VIII. Disagreements

When a Field Office Cultural Heritage staff and Field Office Manager fail to agree on inventory, evaluation, monitoring, and application of Special Treatment Measures, then the Field Office Manager shall initiate consultation with the SHPO.

IX. Reporting and Amending

- A. Each participating Field Office shall report annually to the SHPO and the State Office, a summary of activities carried out under this amendment to the Protocol during the previous fiscal year. The reporting shall be included in the Protocol Annual Report.
- B. Annual reports shall summarize activities carried out under this amendment. These reports are not meant to be compilations of the individual project reports prepared for the range projects; they are meant to be programmatic summaries of data and significant findings.
- C. Annual reporting shall include at least three major sections:
 1. schedules and status of accomplishments in meeting schedules for cultural resource activities in relation to the range management program as identified in Stipulation I; and
 2. results, as annual summaries of accomplishment and significant findings resulting from rangeland management cultural resource activities; and
 3. appendices to the report that would include project, coverage and cultural resource location maps and tabular summaries of total number of cultural resources located, new cultural resources located, cultural resources evaluated, types of treatment measures employed at each location, and cultural resources monitored.

D. Annual reports may contain recommendations for new or revised treatment measures.

E. Either party to this agreement may initiate a process to negotiate new or revised treatment measures or to revise the schedule of inventories. When such a process is initiated, the parties to this agreement shall negotiate new or revised treatment measures or schedule of inventories and such revisions or additions shall be issued as Attachments to these Supplemental Procedures.

STATE DIRECTOR, BUREAU OF LAND MANAGEMENT, CALIFORNIA

/s/ james wesley abbott for_____

By Mike Pool

Date: 8/17/04_____

STATE HISTORIC PRESERVATION OFFICER, CALIFORNIA

/s/ milford wayne donaldson_____

By Milford Wayne Donaldson

Date: 8/18/2004_____

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